EXHIBIT G

California State Lands Commission Presurvey Notice Requirements for Permittees to Conduct Geophysical Survey Activities

All parts of the Presurvey Notice must be adequately filled out and submitted to the CSLC staff a minimum of twenty-one (21) calendar days prior to the proposed survey date to ensure adequate review and approval time for CSLC staff. Note that one or more of the items may require the Permittee to plan well in advance in order to obtain the necessary documentation prior to the Notice due date (e.g., permits from other State or Federal entities).

Please use the boxes below to verify that all the required documents are included in the Presurvey Notice. If "No" is checked for any item, please provide an explanation in the space provided. If additional space is needed, please attach separate pages.

Yes	No	
☒	☐	Geophysical Survey Permit Exhibit F
☒	☐	Survey Location (including a full-sized navigation chart and GPS coordinates for each proposed track line and turning point) Explanation: Provided
☐	☒	Permit(s) or Authorization from other Federal or State agencies (if applicable) Explanation: No Federal agenices or other State agencies are involved.
☒	☐	21-Day Written Notice of Survey Operations to Statewide Geophysical Coordinator/
☒	☐	U.S. Coast Guard Local Notice to Mariners/
☒	☐	Harbormaster and Dive Shop Notifications Explanation: Provided
☒	☐	Marine Wildlife Contingency Plan Explanation: Provided
☒	☐	Oil Spill Contingency Plan Explanation: Provided
☒	☐	Verification of California Air Resources Board's Tier 2-Certified Engine Requirement Explanation: Provided
☒	☐	Verification of Equipment Service and/or Maintenance (must verify sound output) Explanation: Provided
☐	☒	Permit(s) or Authorization from California Department of Fish and Wildlife for surveys in or affecting Marine Protected Area(s) (if applicable) Explanation: Survey area is not and does not affect Marine Protected Areas

NOTE: CSLC staff will also require verification that current biological information was obtained and transmitted as outlined in Section 5 of this permit.

Amendment to February 2017 PRC 9306 - Multibeam and Side Scan Sonar Surveys for Hyperion 1-Mile Outfall Repair Project submittal

Surveys will occur within the crosshatched areas of Figure 1. Areal dimensions and survey boundary coordinates are shown in Table 1. The survey duration would be approximately from July 7th to July 27th, when work for the scour areas will commence. The contractor expects to complete a ~30 foot distance each day, with daily sonar operation of 30 to 45 minutes overall duration, to verify that the required slope and profile of the placed material meets project requirements prior to advancing the crane barge.

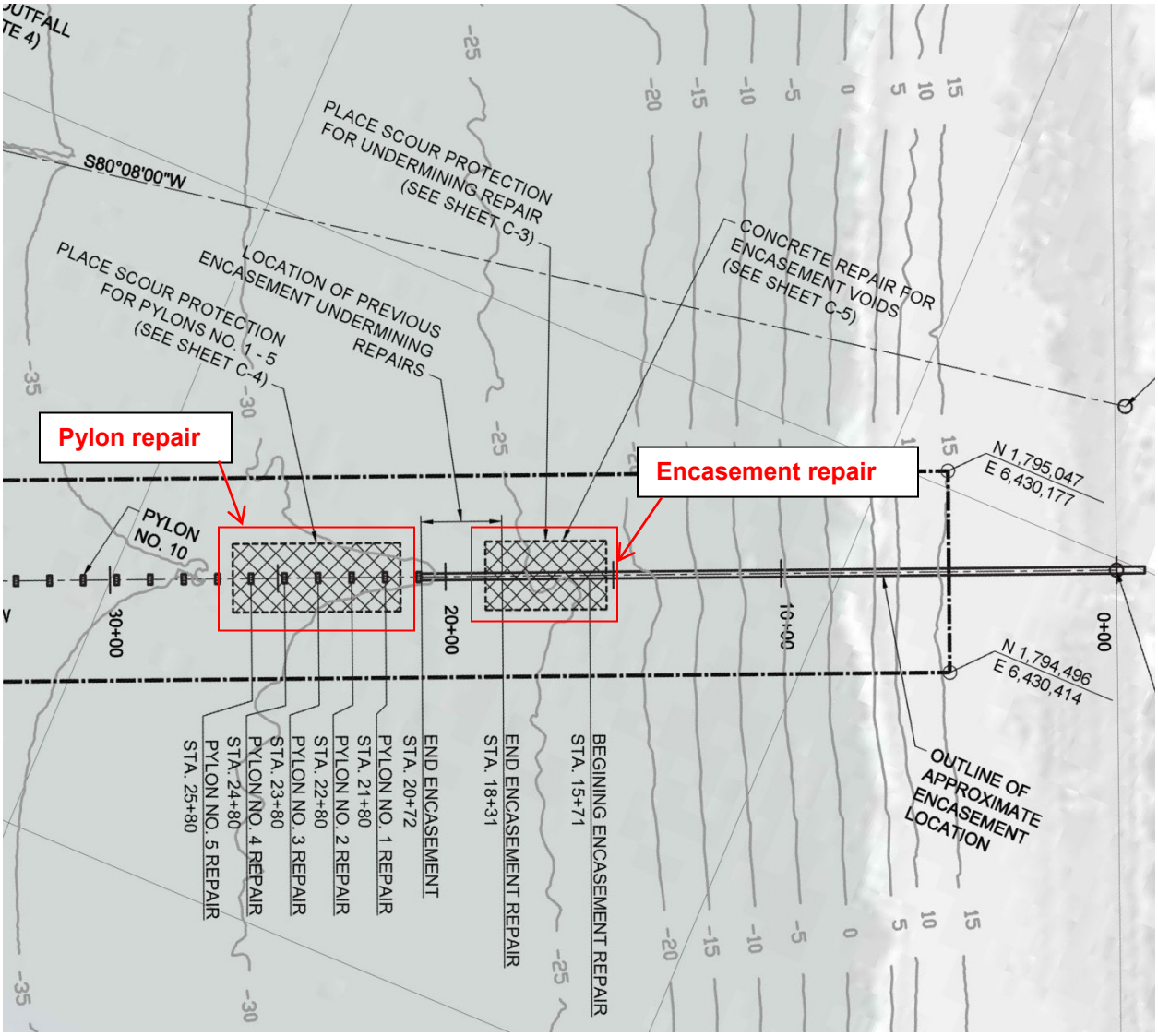


Figure 1. Repair areas which require 2" gravel and 24" rock placement to support scour areas. Planned survey area marked with red outline.

Table 1. Corner coordinates of planned survey areas, Encasement and Pylon scour repair areas.

	Pylon Repair 500 ft by 100 ft		Encasement Repair 400 ft by 100 ft	
NW corner	N 33.9213°	W 118.4396°	N 33.9221°	W 118.4373°
NE corner	N 33.9218°	W 118.4381°	N 33.9225°	W 118.4363°
SW corner	N 33.9208°	W 118.4394°	N 33.9216°	W 118.4371°
SE corner	N 33.9213°	W 118.4378°	N 33.9220°	W 118.4360°

Sonar Description

Through hull-mounted R2Sonic Model 2020 multibeam sonar. Specification sheets for the R2 Sonic multibeam sonar are provided below and on the next page.

2 SONIC SPECIFICATIONS

2.1 Sonic 2020 System Specification

System Feature	Specification
Frequency	400kHz to 200kHz (10kHz steps)
Beamwidth – Across Track (at nadir)	2.0°@ 400kHz / 4.0° @ 200kHz
Beamwidth – Along Track (at nadir)	2.0° @ 400kHz / 4.0° @ 200kHz
Number of Beams	256
Swath Sector	10° to 130° (user selectable)
Maximum Slant Range	1200 metres
Pulse Length	15µSec – 1000µSec
Pulse Type	Shaped Continuous Wave (CW)
Depth Rating	500 metres (3000 metres optional)
Operating Temperature	-10° C to 40° C
Storage Temperature	-30° C to 55° C

Table 2: System Specification

2.2 Sonic 2020 Dimensions and Weights

Component	Dimensions (L x W x D) / Dry Weight
Sonar Head	140mm x 161mm x 133.5mm
Sonar Interface Module (SIM)	280mm x 170mm x 60mm / 2.4kg
Sonar Head mass	4.4kg (in Air); 1.5kg (in Fresh Water)

Table 3: Component Dimensions and Mass

2.3 Sonic 2020 Electrical Interface

Item	Specification
Mains Power	90 – 260 VAC; 45 – 65 Hz
Power Consumption (SIM and Sonar Head)	37w
Power Consumption (Sonar Head Only)	22w
Uplink/Downlink	100/1000Base-T Ethernet
Data Interface	100/1000Base-T Ethernet
Sync IN/OUT	TTL
GPS Timing	1PPS; RS232 NMEA
Auxiliary Sensors	RS232
Deck Cable Length	15 metre (optional to 50 metres)

Table 4: Electrical Interface

2.4 Sonic 2020 Ping Rates (SV = 1500m/sec)

RANGE	PING RATE
2 - 7	60.0
10	55.4
15	39.4
20	30.6
25	25.0
30	21.1
35	18.3
40	16.1
50	13.0
70	9.4
100	6.7
150	4.5
200	3.4
250	2.7
300	2.3
400	1.7
450	1.5
500	1.4
700	1.0
1000	0.7
1200	0.6

Table 5: Ping Rate table

WARNING

THE RECEIVE MODULE IS FILLED WITH OIL THAT WILL FREEZE TO A SOLID AT -10°C. STORAGE BELOW THIS TEMPERATURE (TO -30°C) IS POSSIBLE IF THE HEAD IS SLOWLY THAWED OUT PRIOR TO OPERATION.

Vessel Description

30 foot semi-enclosed cabin cruiser. Two 130 Hp gasoline outboard engines, fuel capacity 120 gallons. The vessel has no name, identified as "TechCom International", CF 0499 TR. Identification is in aft window with company name and logo. The vessel has a green hull and white superstructure.

Oil Spill Plan and Notifications

The vessel is covered by an oil spill contingency plan prepared as part of the construction project.

A sensitive species monitoring and mitigation plan was prepared and submitted to the California Coastal Commission for the project, as well as for all sonar surveys in the OGP February 2017 submission. A Marine Wildlife Observer (MWO) will be on the construction project vessel during the construction phase prior to surveys. A MWO will be on the survey vessel during surveys. Observation, recording, and reporting will follow procedures outlined in the OGP February 2017 submission.

A pre-survey notification will be provided encompassing the duration of the proposed sonar surveys with a Local Notice to Mariners, local harbor masters, and dive shops. Surveys will be conducted only in the immediate construction area where recent placement of gravel/rock occurred to document elevation and slope of deposited material placed for scour protection. There is a current LNM for the construction work area occupied by the crane barge. The crane barge will be in place on June 26th to begin outfall undermining repair work (gravel and cement bag placement below the outfall encasement).

See below the notifications for the Local Notice to Mariners and to local harbors and dive shops.

MBC

27 June 2017

Commander
U.S. Coast Guard, Eleventh District
Bldg. 50-2, CG Island
Alameda, CA 94501-5100

E-Mail: D11LNM@uscg.mil

SUBJECT: Local Notice to Mariners Announcement for Marine Geophysical Surveys at Hyperion 1-Mile Outfall in Santa Monica Bay, California.

Gentlemen:

Please post the following announcement in the Local Notice to Mariners:

SOUTHERN CALIFORNIA – SANTA MONICA BAY – SURVEY OPERATIONS: TechCom International and MBC Applied Environmental Sciences will conduct marine geophysical surveys in a 200' x 800' area over the Hyperion 1-Mile Outfall in Santa Monica Bay, California beginning on 7 July 2017 and ending on 27 July 2017. One 30' survey vessel will be on scene mapping the seafloor using a hull-mounted multibeam sonar. The 30' multibeam sonar vessel "TechCom International' will conduct surveys only during daylight hours (7:00am to 6:00pm). The survey vessels will monitor VHF Channels 13 and 16. Mariners are advised to use caution when transiting the survey area, bounded by the following coordinates:

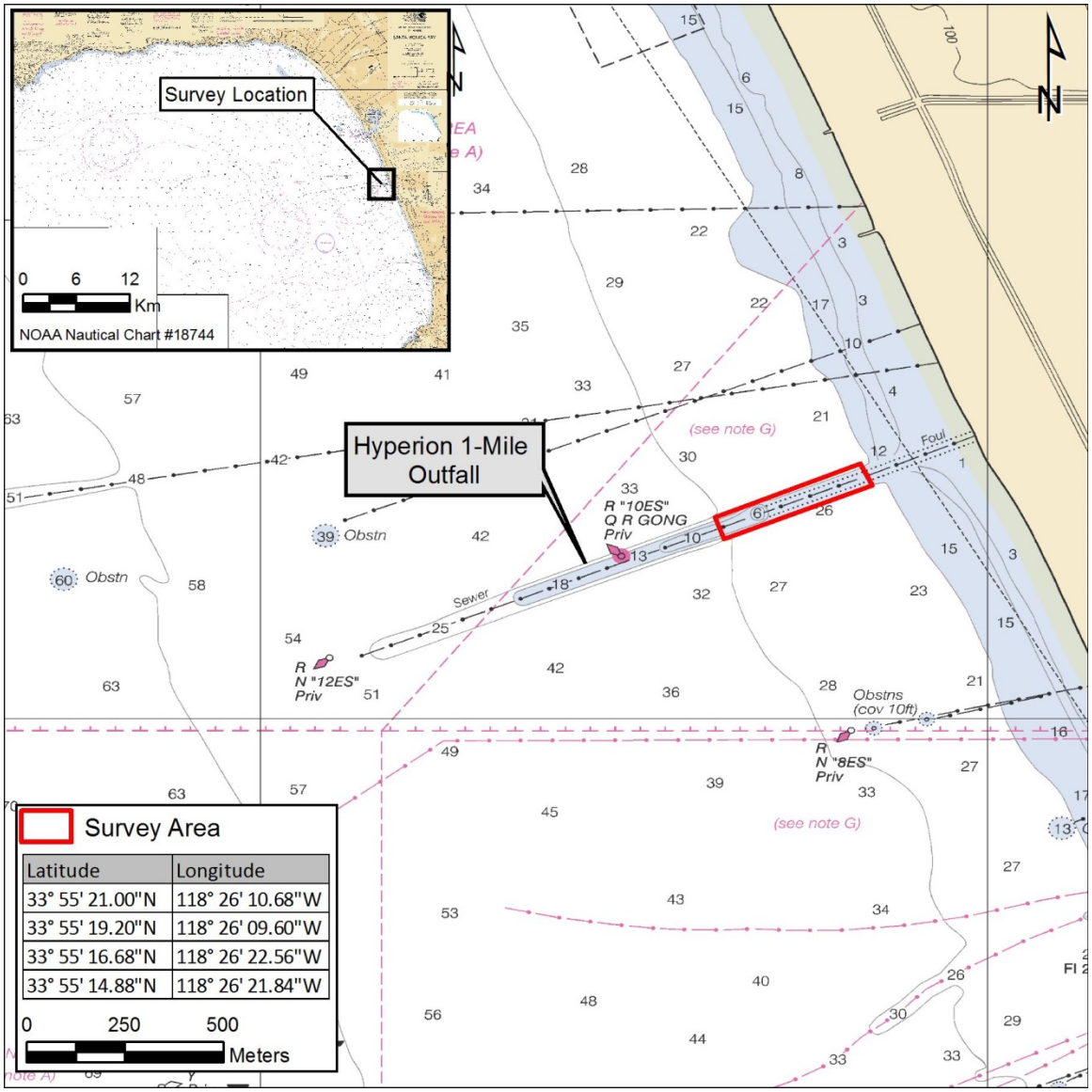
33-55-21.00N 118-26-10.68W
33-55-19.20N 118-26-09.60W
33-55-16.68N 118-26-22.56W
33-55-14.88N 118-26-21.84W

For comments or further details contact Butch Whittle at 949-463-3599 or B.Whittle@tci-corp.com or Robert Moore at 714-514-5652 rmoore@mbcnet.net Chart 18744.

Sincerely,

Robert Moore
Cell: (714) 514-5652
rmoore@mbcnet.net

MBC *Applied Environmental Sciences*
3000 Red Hill Avenue
Costa Mesa, CA 92626
Tel: (714) 850-4830
Fax: (714) 850-4840
Website: **mbcnet.net**


Survey Location
0 6 12
Km
NOAA Nautical Chart #18744
Hyperion 1-Mile Outfall
Survey Area
Latitude
Longitude
33° 55' 21.00"N
118° 26' 10.68"W
33° 55' 19.20"N
118° 26' 09.60"W
33° 55' 16.68"N
118° 26' 22.56"W
33° 55' 14.88"N
118° 26' 21.84"W
0 250 500
Meters
R "10ES" Q R GONG Priv
R N "12ES" Priv
R N "8ES" Priv
Obstn
Obstns (cov 10ft)
Sewer
Foul
(see note G)

From: Robert Moore
To: King Harbor (rbhp@redondo.org)
Cc: Elina Delaroche
Subject: Announcement for offshore marine survey in Santa Monica Bay
Date: Tuesday, June 27, 2017 3:00:23 PM
Attachments: Notice to King Harbor Mariners for Hyperion Outfall Surveys.pdf
July LNM survey map.jpg

To all,
Please post the attached announcement for offshore marine surveys in Santa Monica Bay at the Hyperion 1-Mile Outfall.

Regards,

Bob Moore
Senior Scientist
MBC *Applied Environmental Sciences*
3000 Red Hill Avenue Costa Mesa, CA 92626
ofc 714-850-4830 x 226 fax 714-850-4840 cell 714-514-5652

From: Robert Moore
To: "egodfre@lasd.com"
Subject: Announcement for offshore marine survey in Santa Monica Bay
Date: Tuesday, June 27, 2017 2:40:21 PM
Attachments: Notice to Marina Del Rey Mariners for Hyperion Surveys.pdf

---

Gentlemen,
Please post the attached announcement for offshore marine surveys in Santa Monica Bay at the Hyperion 1-Mile Outfall.

Regards,

Bob Moore
Senior Scientist
MBC *Applied Environmental Sciences*
3000 Red Hill Avenue Costa Mesa, CA 92626
ofc 714-850-4830 x 226 fax 714-850-4840 cell 714-514-5652

From: Robert Moore
To: Dive "N Surf (web@divensurf.com)
Subject: Notification for offshore marine surveys in Santa Monica Bay
Date: Tuesday, June 27, 2017 2:41:21 PM
Attachments: Notice to Santa Monica Bay Divers for Hyperion Surveys.pdf

Gentlemen,
Please post the attached announcement for offshore marine surveys in Santa Monica Bay at the Hyperion 1-Mile Outfall.

Regards,

Bob Moore
Senior Scientist
MBC *Applied Environmental Sciences*
3000 Red Hill Avenue Costa Mesa, CA 92626
ofc 714-850-4830 x 226 fax 714-850-4840 cell 714-514-5652

From: Robert Moore
To: rocky (rocky@scubahaus.com)
Subject: Notification for offshore marine surveys in Santa Monica Bay
Date: Tuesday, June 27, 2017 2:40:23 PM
Attachments: Notice to Santa Monica Bay Divers for Hyperion Surveys.pdf

Gentlemen,
Please post the attached announcement for offshore marine surveys in Santa Monica Bay at the Hyperion 1-Mile Outfall.

Regards,

Bob Moore
Senior Scientist
MBC *Applied Environmental Sciences*
3000 Red Hill Avenue Costa Mesa, CA 92626
ofc 714-850-4830 x 226 fax 714-850-4840 cell 714-514-5652

From: Robert Moore
To: Eco Dive Center
Subject: Notification for offshore marine surveys in Santa Monica Bay
Date: Tuesday, June 27, 2017 2:41:22 PM
Attachments: Notice to Santa Monica Bay Divers for Hyperion Surveys.pdf

---

Gentlemen,
Please post the attached announcement for offshore marine surveys in Santa Monica Bay at the Hyperion 1-Mile Outfall.

Regards,

Bob Moore
Senior Scientist
MBC *Applied Environmental Sciences*
3000 Red Hill Avenue Costa Mesa, CA 92626
ofc 714-850-4830 x 226 fax 714-850-4840 cell 714-514-5652

From: Robert Moore
To: Scuba Dive LA
Subject: Notification for offshore marine surveys in Santa Monica Bay
Date: Tuesday, June 27, 2017 2:41:23 PM
Attachments: Notice to Santa Monica Bay Divers for Hyperion Surveys.pdf

---

Gentlemen,
Please post the attached announcement for offshore marine surveys in Santa Monica Bay at the Hyperion 1-Mile Outfall.

Regards,

Bob Moore
Senior Scientist
MBC *Applied Environmental Sciences*
3000 Red Hill Avenue Costa Mesa, CA 92626
ofc 714-850-4830 x 226 fax 714-850-4840 cell 714-514-5652

EXHIBIT F

PRESURVEY NOTIFICATION FORM

Applicant/Permittee's Mailing Address
MBC Applied Environmental Sciences
3000 Redhill Ave
Costa Mesa, CA 92626

Date: 24 February 2017

Jurisdiction: Federal ____ State X Both ____

If State: Permit #PRC 9306

Region: I

Area: Santa Monicia, CA

GEOPHYSICAL SURVEY PERMIT

Check one: X New survey ____ Time extension of a previous survey

MBC (Applicant/Permittee) will conduct a geophysical survey offshore California in the survey area outlined on the accompanying navigation chart segment. If you foresee potential interference with commercial fishing or other activities, please contact the person(s) listed below:

FEDERAL WATERS (outside 3 nautical miles)

1) Applicant's representative
2) Federal representative (e.g., Bureau of Ocean Energy Management [BOEM] or National Science Foundation [NSF])

NOTE: Any comments regarding potential conflicts in Federal waters must be received by the Applicant's Representative and lead Federal agency within ten (10) days of the receipt of this notice.

STATE WATERS (Inside 3 nautical miles)

1) Permittee's representative
2) CSLC representative

NOTE: Any comments regarding potential conflicts in State waters should be received as soon as possible by the Permittee's representative, no more than fifteen (15) days after the receipt of this notice.

1. Expected Date of Operation March 18-26, 2017
2. Hours of Operation 07:00 -18:00 hours (daylight hours)
3. Vessel Name SV SCORPAENA (side-scan sonar) and SV TATI B (multibeam sonar)
4. Vessel Official Number SV Scorpana = CF6074TP SV Tati B = DE17561
5. Vessel Radio Call Sign N/A - No longer required by Feds
6. Vessel Captain's Name SV Scorpaena = James SV Tati B = David Morse
7. Vessel will monitor Radio Channel(s) 16
8. Vessel Navigation System Differential GPS

9. Equipment to be used SV Scorpaena = Edgetech 4125 side-scan SV Tati B = R2 Sonic 2014 multibeam

a. Frequency (Hz, kHz) Side-scan = 600kHz Multibeam = 200kHz

b. Source level (dB re 1 µPa at 1 meter (m) [root mean square (rms)]) 221, 220

c. Number of beams, across track beamwidth, and along track beamwidth Side-scan = 1 beam H=0.26-deg, V=50-deg; Multibeam = 256 beams, 20-deg@200kHz

d. Pulse rate and length 15usec - 1,000usec; 4Hz 10ms

e. Rise time 0.05ms, 12.5-200usec

f. Estimated distances to the 190 dB, 180 dB, and 160 dB re 1 µPa (rms) isopleths See Table 9F below

g. Deployment depth Side-Scan = 10'-40' Multibeam = 3'

h. Tow speed Side-scan = 3-4 knots Multibeam = 5 knots

i. Approximate length of cable tow Side-scan = 30'-330' Multibeam = 0'

Applicant's Representative:
MBC Applied Environmental Sciences
3000 Redhill Ave
Costa Mesa, CA 92626
ATTN: Steve Sullivan
E-mail: ssullivan@mbcnet.net Tel: 707-246-3696

California State Lands Representative
Richard B. Greenwood
Statewide Geophysical Coordinator
200 Oceangate, 12th Floor
Long Beach, CA 90802-4331
(562) 590-5201

BOEM Representative
Joan Barminski
Regional Supervisor
Office of Strategic Resources
770 Paseo Camarillo
Camarillo, CA 93010
(805) 389-7585

Other Federal Representative (if not BOEM):
Not Applicable

TABLE for 9F: Estimated Distances to Various Isopleths

SOURCE	Dist to 160dB	Dist to 180dB	Dist to 190dB
Side-scan	30m	8m	3m
Multibeam	90m	50m	30m

23 February 2017

Commander
U.S. Coast Guard, Eleventh District
Bldg. 50-2, CG Island
Alameda, CA 94501-5100

E-Mail: D11LNM@uscg.mil

SUBJECT: Local Notice to Mariners Announcement for Marine Geophysical Surveys at Hyperion 1-Mile Outfall in Santa Monica Bay, California.

Gentlemen:

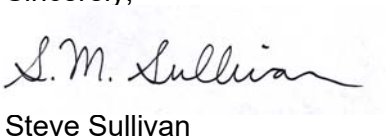
Please post the following announcement in the Local Notice to Mariners:

SOUTHERN CALIFORNIA – SANTA MONICA BAY – SURVEY OPERATIONS: MBC Applied Environmental Sciences will conduct marine geophysical surveys in a 1,000' x 4,200' area over the Hyperion 1-Mile Outfall in Santa Monica Bay, California beginning on 18 March 2017 and ending on 26 March 2017. Two 26' survey vessels will be on scene mapping the seafloor, one vessel using a hull-mounted multibeam sonar and the second vessel towing a submerged side-scan sonar towfish located 100m astern. The 26' multibeam sonar vessel TATI B and the 26' side-scan sonar vessel SCORPAENA will conduct surveys only during daylight hours (7:00am to 6:00pm). The survey vessels will monitor VHF Channels 13 and 16. Mariners are advised to use caution when transiting the survey area, bounded by the following coordinates:

N33º 55' 07.7707" W118º 26' 58.7217"
N33º 54' 58.6874" W118º 26' 53.9861"
N33º 55' 16.4652" W118º 26' 05.0028"
N33º 55' 25.5391" W118º 26' 09.7371"

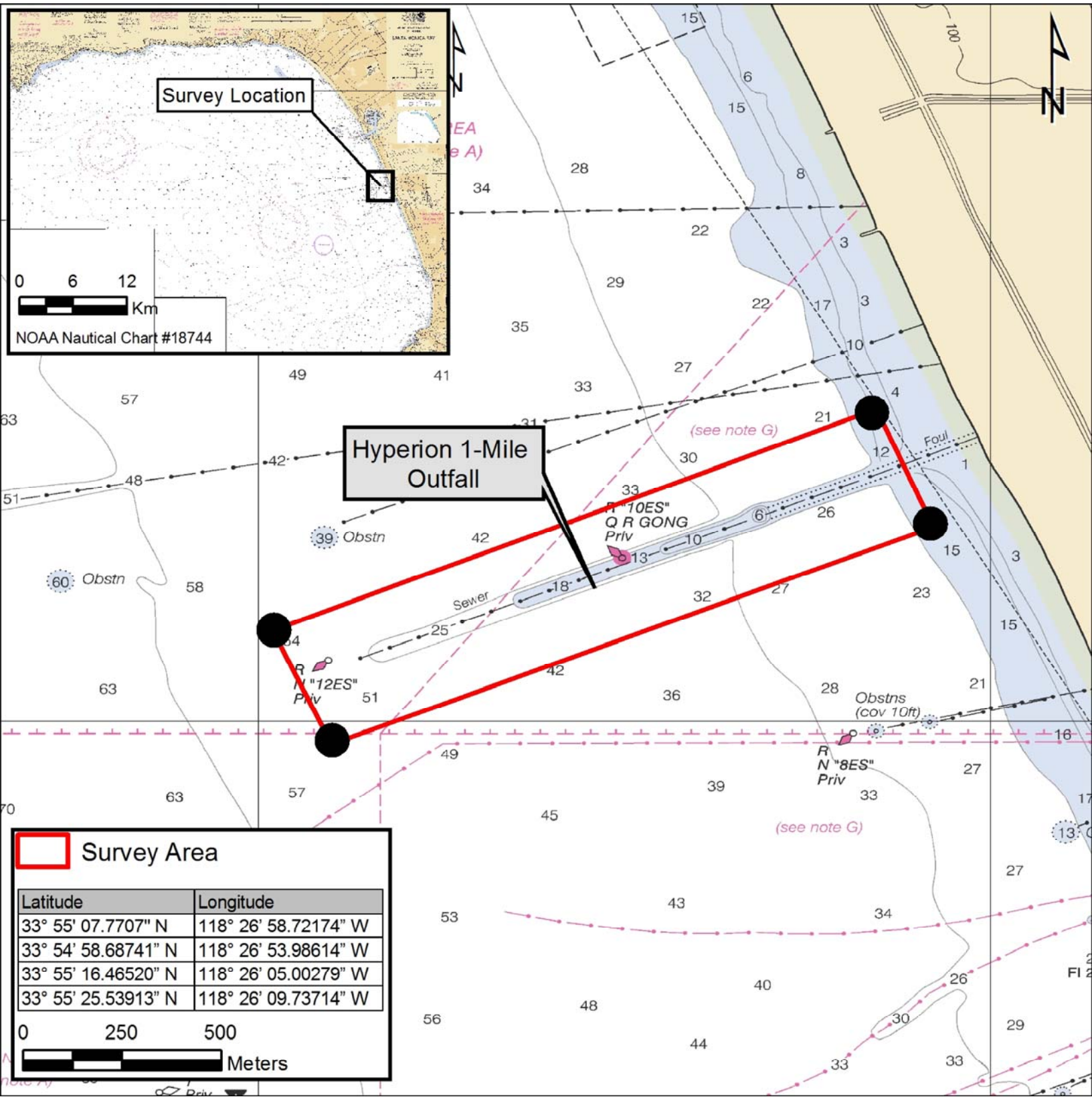
See attached map for location of the survey area. For comments or further details contact Steve Sullivan at 707-246-3696 or ssullivan@mbcnet.net. Chart 18744.

Sincerely,



Steve Sullivan
Cell: (707) 246-3696
ssullivan@mbcnet.net

MBC *Applied Environmental Sciences*
3000 Red Hill Avenue
Costa Mesa, CA 92626
Tel: (714) 850-4830
Fax: (714) 850-4840
Website: **mbcnet.net**


Survey Location
0 6 12
Km
NOAA Nautical Chart #18744
Hyperion 1-Mile Outfall
(see note G)
Foul
Sewer
Obstn
Obstns (cov 10ft)
R "10ES" Q R GONG Priv
R "12ES" Priv
R "8ES" Priv
Survey Area
Latitude
Longitude
33° 55' 07.7707" N
118° 26' 58.72174" W
33° 54' 58.68741" N
118° 26' 53.98614" W
33° 55' 16.46520" N
118° 26' 05.00279" W
33° 55' 25.53913" N
118° 26' 09.73714" W
0 250 500
Meters

MBC: OIL SPILL AND MARINE WILDLIFE CONTINGENCY PLAN FOR HYPERION 1-MILE OUTFALL SURVEYS

February 2017

PRC 9306 – Multibeam and Side-Scan Sonar Surveys

MBC *Applied Environmental Sciences*
Costa Mesa, California

TABLE OF CONTENTS

SECTION I. INTRODUCTION

The Hyperion 1-Mile Outfall is located in central Santa Monica Bay, California (Figure 1). A construction project to rehabilitate the Hyperion 1-Mile Outfall is scheduled to begin in April 2017 and be completed by September 30, 2017. The rehabilitation of the Hyperion 1-Mile Outfall includes adding rock ballast scour protection and concrete repairs to sections of the underwater Outfall. Construction activities for the Hyperion 1-Mile Outfall Repair Project include commercial diving and placement of gravel, rock, and concrete filled geo-textile bags at selected locations.

Figure 1: Location Map for Outfall.

Construction activities will include commercial dive vessels anchoring over the Outfall so that divers can perform concrete repairs to selected portions of the encasement and piles (Figure 2). Divers will install 2-inch gravel from anchored barges to form a level surface below the undermined sections of the Outfall's encasement. Divers will install geotextiles bags under the Outfall's encasement, fill them with concrete, and cover them with 2-inch minus gravel. To complete the Outfall rehabilitation, ½-ton rock will be deposited on to the Hyperion 1-Mile Outfall for scour protection.

MBC Applied Environmental Sciences (MBC) will support the construction project by conducting side-scan sonar and multibeam sonar surveys before, after, and during the 6-month project for construction inspection and environmental compliance purposes. Pre-construction surveys will be conducted in March 2017, followed by monthly inspection surveys, and post-construction surveys in September-October 2017.

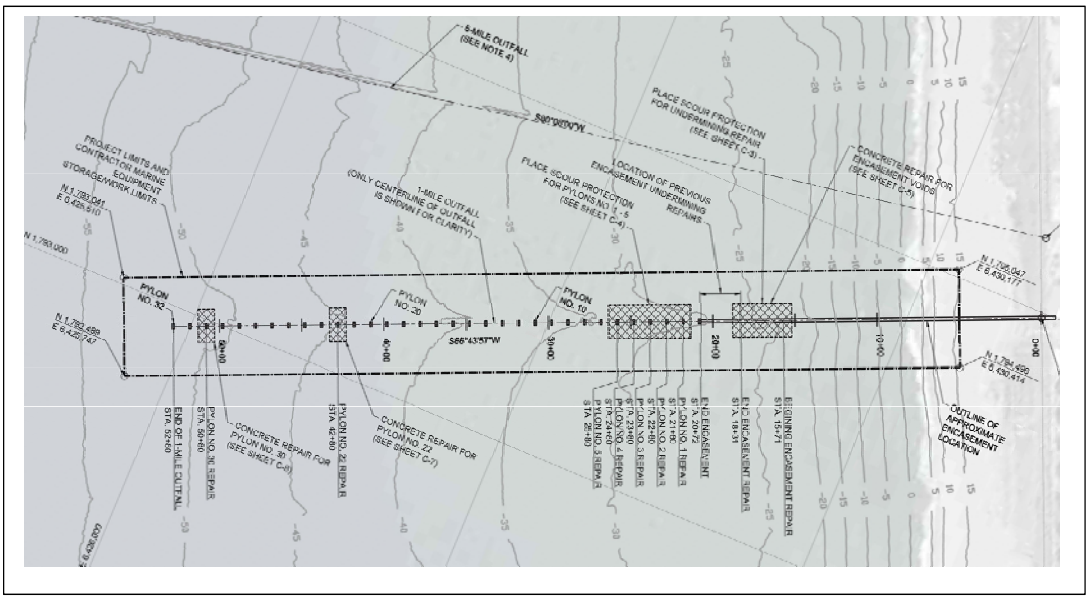


FIGURE 2: Map of HTP 1-Mile Outfall, showing location of rock placement & concrete repairs.

This Oil Spill and Marine Wildlife Contingency Plan is intended to be used for up to seven (7) surveys of the Hyperion 1-Mile Outfall scheduled at approximate 1-month intervals beginning in March 2017 and ending in September-October 2017. This Plan is for the pre-construction survey scheduled for March 2017, up to five (5) intermediate inspection surveys that may be conducted monthly, and the final post-construction survey scheduled for September-October 2017. Prior to conducting each survey, MBC will notify the California State Lands Commission, publish a notice-to-mariners with the U.S. Coast Guard, and send e-mail notifications to all local marina, harbors, and dive shops.

SECTION II. SURVEY AND EQUIPMENT DESCRIPTIONS

MBC will conduct the side-scan sonar survey while the survey vessel SCORPAENA slowly transits at 5 knots or less along eleven (11) pre-programmed survey lines oriented perpendicular to shore and parallel to the Hyperion 1-Mile Outfall alignment. Two (2) survey lines are parallel to shore, including an offshore survey line across the end of the Hyperion 1-Mile Outfall for calibrating the side-scan sonar layback and a nearshore survey line along the 20' depth contour by the multibeam sonar to measure water depths within the surf zone. All survey lines will be within the 1,000' x 4,200' boundary around the Hyperion 1-Mile Outfall depicted in Figure 3. Horizontal coordinates for the thirteen (13) survey lines are provided in Table 1 in both Zone 5 of the California Coordinate System (NAD83) and latitude/longitude (NAD83).

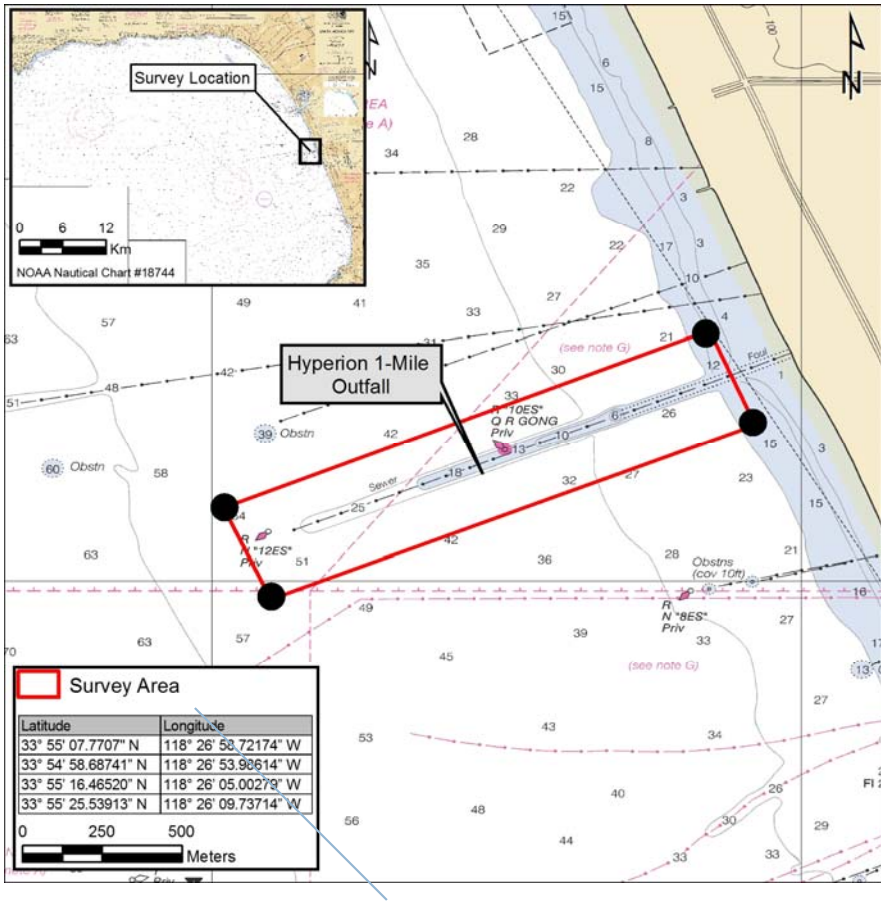


Figure 3: Nautical Chart 18744 showing side-scan/multibeam survey boundaries & survey lines.

TABLE 1: Horizontal Coordinates for Planned Side-Scan Sonar Survey Lines, in feet using the California State Coordinate System, Zone 5 (NAD83) and Latitude/Longitude (NAD83).

	SHORE-SIDE		OFFSHORE		
Line	Easting/Lat	Northing/Long	Easting/Lat	Northing/Long	Notes
1	6,429,383.6' 33*55'25.54"	1,794,923.1' 118*26'09.74"	6,425,246.4' 33*55'07.77"	1,793,146.9' 118*26'58.72"	Northern-most line
2	6,429,423.0' 33*55'24.62"	1,794,831.2' 118*26'09.26"	6,425,285.9' 33*55'06.87"	1,793,055.0' 118*26'58.26"	
3	6,429,462.5' 33*55'23.72"	1,794,739.4' 118*26'08.78"	6,425,325.4' 33*55'05.96"	1,792,963.1' 118*26'57.78"	
4	6,429,501.9' 33*55'22.81"	1,794,647.5' 118*26'08.31"	6,425,364.8' 33*55'05.06"	1,792,871.2' 118*26'57.31"	
5	6,429,541.4' 33*55'21.90"	1,794,555.6' 118*26'07.84"	6,425,404.3' 33*55'04.15"	1,792,779.3' 118*26'56.84"	
6	6,429,580.8' 33*55'20.99"	1,794,463.7' 118*26'07.37"	6,425,443.7' 33*55'03.24"	1,792,687.4' 118*26'66.36"	Centerline over Outfall
7	6,429,620.3' 33*55'20.09"	1,794,371.8' 118*26'06.89"	6,425,483.2' 33*55'02.34"	1,792,595.5' 118*26'55.89"	
8	6,429,659.7' 33*55'19.18	1,794,279.9' 118*26'06.42"	6,425,522.6' 33*55'01.43"	1,792,503.7' 118*26'55.42"	
9	6,429,699.2' 33*55'18.27"	1,794,188.0' 118*26'06.95"	6,425,562.1' 33*55'00.52"	1,792,411.8' 118*56'54.94"	
10	6,429,738.6' 33*55'17.36"	1,794,096.1' 118*26'06.47"	6,425,601.5' 33*54'59.61"	1,792,319.9' 118*26'54.47"	
11	6,429,778.1' 33*55'16.47"	1,794,004.2' 118*26'05.00"	6,425,641.0' 33*54'58.69"	1,792,228.0' 118*26'53.99"	Southern-most line
12	6,425,247.0' 33*55'07.78"	1,793,146.0' 118*26'58.72"	6,425,642.0' 33*54'58.69"	1,792,226.0' 118*26'53.99"	Offshore end line
13	6,429,383.0' 33*55'25.54"	1,794,924.0' 118*26'25.54"	6,429,778.0' 33*55'16.47"	1,794,005.0' 118*26'05.00"	Nearshore end line

The multibeam sonar survey will cover a smaller area (600' x 4,200') than the side-scan sonar survey. The multibeam sonar survey will collect water depth measurements along twenty-one (21) survey lines listed in Table 2.

Vessel Descriptions

Two (2) vessels will be used for the side-scan sonar and multibeam sonar surveys in support of the Hyperion 1-Mile Outfall Repair Project. The side-scan sonar survey will be conducted from the survey vessel (SV) SCORPAENA and the multibeam sonar survey will be conducted using the SV TATI B. Both vessels are 26-ft long with inboard fuel tanks. Each vessel has 130 gallons of fuel capacity and uses approximately 2.0 gallons per hour at survey speed. The SV SCOPAENA is a diesel-powered vessel with inboard/outboard drive and the SV TATI B has gasoline-powered outboard motors.

TABLE 2: Horizontal Coordinates for Planned Multibeam Sonar Survey Lines, in feet using the California State Coordinate System, Zone 5 (NAD83).

GEOGRAPHIC NAD 83				
MULTIBEAM LINES				
	Latitude	Longitude	Latitude	Longitude
LINE 01	33.9170271	118.4479873	33.9217746	118.4349004
LINE 02	33.9194766	118.4414835	33.9218502	118.4349399
LINE 03	33.9171783	118.4480662	33.9219258	118.4349793
LINE 04	33.9196278	118.4415624	33.9220014	118.4350188
LINE 05	33.9173294	118.4481451	33.9220770	118.4350583
LINE 06	33.9197790	118.4416413	33.9221526	118.4350977
LINE 07	33.9174806	118.4482241	33.9222282	118.4351372
LINE 08	33.9199302	118.4417202	33.9223037	118.4351767
LINE 09	33.9176318	118.4483030	33.9223793	118.4352161
LINE 10	33.9200813	118.4417991	33.9224549	118.4352556
LINE 11	33.9177830	118.4483819	33.9225305	118.4352951
LINE 12	33.9202325	118.4418780	33.9226061	118.4353345
LINE 13	33.9179341	118.4484608	33.9226817	118.4353740
LINE 14	33.9203837	118.4419570	33.9227573	118.4354134
LINE 15	33.9180853	118.4485397	33.9228328	118.4354529
LINE 16	33.9205349	118.4420359	33.9229084	118.4354924
LINE 17	33.9182365	118.4486187	33.9229840	118.4355318
LINE 18	33.9206861	118.4421148	33.9230596	118.4355713
LINE 19	33.9183877	118.4486976	33.9231352	118.4356108
LINE 20	33.9208372	118.4421937	33.9232108	118.4356502
LINE 21	33.9185388	118.4487765	33.9232864	118.4356897

SV Scorpaena will tow side-scan sonar.

SV Tati B will conduct multibeam survey.

The survey vessels that will conduct the side-scan sonar and multibeam surveys for the Hyperion 1-Mile Outfall Repair Project comply with the California Air Resources Board's (CARBs) Tier 2-certified engine requirements for marine vessels.

The survey vessel SCORPAENA will conduct the side-scan sonar survey. The SV SCORPAENA is a 26' mono hull vessel built by Davis Marine in 2010. The SCORPAENA is powered by a Volvo Penta AD41 inboard diesel engine with direct injection, turbocharging, and aftercooler that minimize noxious exhaust emissions. The engine is Tier 2 certified by the International Maritime Organization (IMO) and the U.S. Environmental Protection Agency (EPA). The SV SCORPAENA cannot exceed the daily NOx emissions because the vessel only holds 130-gallons of fuel and the anticipated maximum fuel consumption will be less than 30 gallons. The CSLC has previously allowed marine geophysical surveys from vessels that have an identical Volvo Penta AD41 engine.

The survey vessel "Tati B" will conduct the multibeam sonar survey. The survey vessel "Tati B" is a 26' mono hull vessel built by Thomas Marine in 2009. The vessel is powered by two outboard Honda 4 Stroke gasoline engines with a three-star rating. The SV TATI B uses gasoline as fuel, and only diesel engines are required to comply with the CARB Tier 2 Certification. The TATI B cannot exceed the daily NOx emissions since the vessel only holds 130-gallons of fuel and the anticipated maximum fuel consumption will be less than 30 gallons.

Sonar Descriptions

All of the sonar equipment used during the surveys is low energy. All the sonar equipment has been utilized on surveys within the last few months and has performed to the manufacturer's specifications. Once on site and prior to deployment in the water, all equipment undergoes a visual inspection to make sure all connections are secure and there is no damage to any cables/connections or equipment. After a physical check of the equipment, the sonar devices are powered on deck and checked to make sure that everything is in working order. The manufacturer's internal system software will confirm the system is operating properly and there are no grounding, voltage or fault issues. Once all system checks are verified, the equipment is set to the minimal power settings (if applicable) and deployed. Once deployed, the equipment will be powered up slowly to obtain an optimal data set. The manufacturer's specification sheets are provided in the following sections, along with a description of the sonar equipment characteristics

Side-Scan Sonar: MBC will conduct the side-scan sonar surveys of the Hyperion 1-Mile Outfall using the 26' survey vessel SCORPAENA, a dual-frequency high-resolution side-scan sonar, a GPS receiver, and modern (2017) software. An *EDGETECH* Model 4125 high-resolution side-scan sonar will be used to survey for construction inspection and environmental compliance purposes. The *EDGETECH* 4125 side-scan sonar uses 600kHz frequencies to image the seafloor. The 600kHz frequency provides acoustic images that extend 120m (394') on each side of the side-scan towfish. A certificate of conformance for the side-scan sonar from the equipment manufacturer is provided on the next page.

EdgeTech

4 Little Brook Rd., West Wareham, MA 02576
Tel: (508) 291-0057 Fax: (508) 291-2491
Email: info@edgetech.com Web: www.edgetech.com

CERTIFICATE OF CONFORMANCE

CUSTOMER: MBC Applied Environmental Sciences

CONTRACT / PURCHASE ORDER NUMBER: 4435

EDGETECH SALES ORDER NUMBER: SO8935

We certify that the following items have met all product requirements and sound source verification as set forth in EdgeTech's approved assembly and Factory Acceptance Test documentation.

Model/Part #: 4125 Description: Side Scan Towfish Serial #: ETN49920

Tow Fish specifications:
(Dual Frequency – 600/1600 kHz)
Material Stainless Steel Construction
Tow Body dimensions 96 mm (3.75 in) OD, 980 mm (39 in) Length
Weight 15.4 Kg (34 Lbs) in air
(Optional weight available for deep operation)
Operating Depth 200 meters max.
Tow Speed 1-8 knots
Safety shear pin 420 Kg (930 Lbs)
Input power DC 70V, 50 watts maximum
Data link interface Ethernet, 10Mbit/s
Beam width 400 kHz Horizontal, 0.46°, All Sidelobes < -36dB
Vertical, 50°
Beam width 900 kHz Horizontal, 0.28°, All sidelobes < -36dB
Center Frequency 400 kHz/ 900 kHz
Sound Source Level: 210db//uPa

Jim Allan

Digitally signed by Jim Allan
DN: cn=Jim Allan, o=EdgeTech, ou, email=jim.allan@edgetech.com, c=US
Date: 2016.03.11 10:09:15 -08'00'

EdgeTech

By: _____

Date: March 27, 2015

Multibeam Sonar: The multibeam sonar survey of the Hyperion 1-Mile Outfall will be conducted using the 26' SV TATIB with a hull-mounted R2Sonic Model 2024 multibeam sonar. Specification sheets for the R2 Sonic multibeam sonar are provided below and on the next page.

2 SONIC SPECIFICATIONS

2.1 Sonic 2024 System Specification

System Feature	Specification
Frequency	400kHz / 200kHz
Beamwidth – Across Track (at nadir)	0.5°@ 400kHz / 1.0° @ 200kHz
Beamwidth – Along Track (at nadir)	1.0° @ 400kHz / 2.0° @ 200kHz
UHR Beamwidth (at nadir)	**0.3° Across Track x 0.6° Along Track**
Number of Beams	256
Swath Sector	10° to 160° (user selectable)
UHR Swath Sector	**10° to 60°** (user selectable)
Maximum Slant Range	1200 metres
Pulse Length	15µSec – 1000µSec
Pulse Type	Shaped Continuous Wave (CW)
Depth Rating	100 metres (3000 metres optional)
Operating Temperature	-10° C to 40° C
Storage Temperature	-30° C to 55° C

Table 2: System Specification

2.2 Sonic 2022 System Specification

System Feature	Specification
Frequency	400kHz / 200kHz
Beamwidth – Across Track (at nadir)	1.0°@ 400kHz / 2.0° @ 200kHz
Beamwidth – Along Track (at nadir)	1.0° @ 400kHz / 2.0° @ 200kHz
UHR Beamwidth (at nadir)	**0.6° Across Track x 0.6° Along Track**
Number of Beams	256
Swath Sector	10° to 160° (user selectable)
UHR Swath Sector	**10° to 60°** (user selectable)
Maximum Slant Range	1200 metres
Pulse Length	15µSec – 1000µSec
Pulse Type	Shaped Continuous Wave (CW)
Depth Rating	100 metres (3000 metres optional)
Operating Temperature	-10° C to 40° C
Storage Temperature	-30° C to 55° C

2.3 Sonic 2024 Dimensions and Weights

Component	Dimensions (L x W x D) / Dry Weight
Receiver Module	480mm x 109mm x 190mm / 12.9kg
Projector	273mm x 108mm x 86mm / 3.3kg
Sonar Interface Module (SIM)	280mm x 170mm x 60mm / 2.4kg
I2NS Sonar Interface Module (SIM)	280mm x 170mm x 126.4mm / 4.2kg
Receive module and Projector mass in water	**5.9kg (Fresh)**

Table 3: Component Dimensions and Mass

R2SONIC

2.4 Sonic 2022 Dimensions and Weights

Component	Dimensions (L x W x D) / Dry Weight
Receiver Module	276mm x 109mm x 190mm / 7.7kg
Projector	273mm x 108mm x 86mm / 3.3kg
Sonar Interface Module (SIM)	280mm x 170mm x 60mm / 2.4kg
I2NS Sonar Interface Module (SIM)	280mm x 170mm x 126.4mm / 4.2kg
Receive module and Projector mass in water	**4.0kg (Fresh)**

2.5 Sonic 2024/Sonic 2022 Electrical Interface

Item	Specification
Mains Power	90 – 260 VAC; 45 – 65 Hz
Power Consumption (SIM and Sonar Head)	75 Watt (Sonic 2022: 54 Watt)
Power Consumption (Sonar Head Only)	50W avg.; 90W Peak (Sonic 2022: 35W avg.; 70W Peak)
Integrated Inertial Navigation System (I2NS)	38.4W (SIM and IMU with Antennas)
Uplink/Downlink	10/100/1000Base-T Ethernet
Data Interface	10/100/1000Base-T Ethernet
Sync IN/OUT	TTL
GPS Timing	1PPS; RS232 NMEA
Auxiliary Sensors	RS232 / Ethernet
Deck Cable Length	15 metre (optional to 50 metres)

Table 4: Electrical Interface

2.6 Sonic 2024/2022 Ping Rates (SV = 1500.00m/sec)

RANGE	PING RATE
2 - 7	60.0
10	55.4
15	39.4
20	30.6
25	25.0
30	21.1
35	18.3
40	16.1
50	13.0
70	9.4
100	6.7
150	4.5
200	3.4
250	2.7
300	2.3
400	1.7
450	1.5
500	1.4
700	1.0
1000	0.7
1200	0.6

Table 5: Ping Rate table

WARNING

THE RECEIVE MODULE IS FILLED WITH OIL THAT WILL FREEZE TO A SOLID AT -10°C. STORAGE BELOW THIS TEMPERATURE (TO -30°C) IS POSSIBLE IF THE HEAD IS SLOWLY THAWED OUT PRIOR TO OPERATION.

The deployment, operation, and retrieval of a side scan sonar and a multibeam sonar in support of the Hyperion 1-Mile Outfall Repair Project may result in potential impacts to the marine environment. Potential impacts include hydrocarbon spills and ship strike, harassment, and acoustic effects on sensitive marine life. Ship strikes and harassment could occur while the survey vessel is progressing through the multibeam or side scan sonar transects. Acoustic effects could occur while the multibeam and side scan sonars are operating.

The following oil spill and marine wildlife contingency plan was developed to serve as the guidance document used by MBC during side-scan sonar and multibeam sonar surveys in support of the Hyperion 1-Mile Outfall Repair Project in order to minimize any and all of the potential effects.

SECTION III. OIL SPILL CONTINGENCY PLAN

The release of hydrocarbons (fuel, lubricants, hydraulic fluid, etc.) into the marine environment can cause significant environmental damage. MBC minimizes the chances of such releases to the extent possible. All vessels and sonar survey equipment used during the Hyperion 1-Mile Outfall Repair Project will be maintained in accordance with manufacturer's specifications. Routine maintenance and inspections are conducted by the boat captains to monitor for unusual wear or indications of potential failure in all systems that may cause an accidental hydrocarbon spill.

All sonar survey vessels are trailered, and all fueling is completed at a shore-side gas station while the vessel is on the trailer and out of the water where all spills can be easily contained with no release to an aquatic environment. No fueling of the survey vessels is allowed when the vessel is in the water. While fueling, absorbent pads (3M Type 156 Sorbent Pads) are placed to catch all possible spills. All spills are immediately cleaned using approved materials such as absorbent pads, fuel bibs, and cat litter. All absorbents will be disposed of in properly marked metal containers in accordance with Title 8 General Safety Orders Section 5545.

Training

Only trained personnel are allowed to fuel the vessels. Training includes: proper filling of the vessel's fuel tank, correct deployment of absorbent pads around and under the fueling port, proper insertion of the flexible hose without fuel flowing out of the hose, stress the importance of focused attention on the fueling to monitor for spills so fueling may be stopped as soon as possible to minimize the spill, and the correct use of absorbent materials in addition to the absorbent pads for spills that exceed the deployed pads. Bilge blowers will be operated for 5-minutes after fueling.

Spill Cleanup Equipment Supply Storage

All vessels will maintain a stock of no less than 30 absorbent pads and no less than 30 sealable plastic storage bags to contain soiled pads stored near the helm for quick access

by the boat captain. One box of rubber gloves and one pair of safety glasses will be stored with the absorbent pads. A fire extinguisher will be present at all times during fueling and on the vessels. Appendix 1 contains an excerpt of the MBC corporate Safety and Health Manual relevant to oil spill prevention and response containing a checklist of actions and the list of agencies to be contacted in the event an accidental spill occurs.

Notifications

All spills will be reported as soon as the spill is contained to MBC Office Manager Michael Mancuso and the MBC project manager Robert Moore. The following information will be reported to Mr. Mancuso and Mr. Moore:

- Your name
- Location/Date/Time
- Type of fuel spilled and approximate volume of fuel spilled
- Current disposition of spill (ongoing/contained/cleaned up)
- Possible health hazard
- Disposition of materials used to clean up spill
- Cause of spill, if known

Mr. Mancuso will, as needed, notify the appropriate local, state, and federal authorities as well as brief MBC's president. Any further legal obligations and responsibilities will be handled by MBC's president and/or his designee.

SECTION IV. SENSITIVE SPECIES MONITORING AND MITIGATION PLAN

Relevant Regulations

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) prohibits the take of any marine mammal within the waters of the United States, defining "take" as: *harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes, without limitation, any of the following: The collection of dead animals, or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a marine mammal*."

The 1994 amendments to the MMPA further define harassment as "any act of pursuit, torment, or annoyance which has the potential" to: (A) "injure a marine mammal or marine mammal stock in the wild", or (B) "disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering." Sections 101 and 102 of the MMPA prohibit intentional killing or harassment of marine mammals but allow incidental contact in the course of normal vessel operations.

Endangered Species Act

The portions of both the Federal and California Endangered Species Act (ESA) that pertain to geophysical surveys specifically prohibit (1) the take of organisms listed under the ESA and (2) damage to their critical habitat. Several whales and sea turtles common to southern California are listed under the ESA, which are described in the Species Summary below.

Potentially Affected Marine Species

Whales

Several species of whale are known to occur in the Southern California Bight and are therefore potentially impacted by offshore geophysical surveys (Table 1). With the exception of the gray whale and blue whale, few whale species are reasonably likely to occur within the nearshore zone where MBC would survey. Most whale species have predominant distributions and Southern California Bight habitat well offshore of the 20-m isobath (the greatest offshore depth for the Hyperion 1-Mile Outfall survey). Gray whales transit through the Southern California Bight near the coast with their seasonal migrations occurring in the winter and spring.

TABLE 1. WHALES KNOWN TO OCCUR IN THE SOUTHERN CALIFORNIA BIGHT (SCB) AND THEIR MOST COMMON PROXIMITY TO THE COAST (HABITAT), KNOWN SEASONALITY IN THE AREA, AND POTENTIAL FOR IMPACT FROM MBC'S GEOPHYSICAL SURVEYS.

Whale Species	SCB Habitat	SCB Seasonality	Potential For Impact
Gray whale (*Eschrichtius robustus*)	Nearshore	Fall-Spring	Possible/Unlikely
Blue whale (*Balaenoptera musculus*)	Nearshore to Offshore	Summer	Possible/Unlikely
Fin whale (*B. physalus*)	Offshore	Summer	Unlikely
Sei whale (*B. borealis borealis*)	Offshore	Fall-Spring	Very Unlikely
Humpback whale (*Megaptera novaeangliae*)	Offshore	Fall-Winter	Very Unlikely
Sperm whale (*Physeter macrocephalus*)	Far Offshore	Spring-Fall	Very Unlikely
Minke whale Balaenoptera acutorostrata	Offshore	Unknown	Very Unlikely
Bryde's whale Balaenoptera brydei	Offshore	Unknown	Very Unlikely

Blue whales are less common in the Southern California Bight than gray whales. Unlike gray whales, blue whales seasonally occur in the summer within the Southern California Bight and are therefore more likely to occur in the survey area than gray whales. In any regard, whales of any species are not likely to enter the protection zone (defined in the Marine Biological Resources Protection subsection). All whales common to southern California are protected under the MMPA and the ESA, except the gray whale which has been de-listed from the ESA.

Dolphins (various species)
Several species of dolphin occur along the southern California coast with varying frequency. Pacific white sided (*Lagenorhynchus obliquidens*), common dolphins (*Delphinus* spp.) and bottlenose dolphin (*Tursiops truncatus*) are the most commonly encountered. Short-finned pilot whales (*Globicephala macrorhynchus*), Risso's dolphin (*Grampus griseus*) and false killer whales (*Pseudorca crassidens*) are less commonly encountered but occasionally occur in Santa Monica Bay. Orcas (*Orcinus orca*) are often observed in spring while the gray whales are migrating north with calves. The presence of the orca is believed to be one reason gray whales migrate so close to shore, as this minimizes the chance of encountering orca pods further offshore. Due to their swimming ability, potential geophysical survey activities pose little real threat to healthy individuals. All dolphins common to southern California are protected by the MMPA, but not ESA.

California Sea Lion (*Zalophus californianus*)
Abundance and Description in the Area: California sea lions are the most common pinniped (seals and sea lions) in southern California. They are present, often in large numbers, throughout bays, harbors, and coastal waters of southern California. California sea lions can be easily distinguished from the other common pinniped of the area, Pacific harbor seal (*Phoca vitulina*), by the presence of an external ear flap. It is present on California sea lions and absent on Pacific harbor seals. There is additional concern over the increasing frequency of sick and injured animals in southern California due to malnutrition and domoic acid poisoning. Behavior of these individuals can be more erratic and unpredictable, and more suspect to further injury than their healthy counterparts. California sea lions are protected under the MMPA, but not the ESA.
Migration: California sea lions are present along the California coast year-round.
Behavior: Curious by nature, California sea lions are commonly observed approaching boats and hauling out on any physical structure they can, including docks, boats, buoys, barges, etc. California sea lions are excellent swimmers with outstanding underwater agility. Their curious nature does, however, expose them to risk. It is expected that the California sea lions will be capable of evading the MBC geophysical survey vessel, but attention should be paid to ensure no animals are affected. Sick or injured individuals will require greater scrutiny.

Pacific Harbor Seal (*Phoca vitulina*)
Abundance and Description in the Area: Pacific harbor seals are typically less abundant than California sea lions. As their name implies, Pacific harbor seals are more commonly observed in the bays and harbors in southern California than along the open coast. When observed along the open coast, Pacific harbor seals are more common in the nearshore

waters than offshore. Pacific harbor seals are typically smaller than California sea lions, with black or charcoal coat mottled with white patches, in addition to the lack of an ear flap.
Migration: Pacific harbor seals are present year-round in southern California.
Behavior: Pacific harbor seals are not as naturally curious as California sea lions, but they will approach boats seeking food. They are skilled swimmers and would be capable of evading the geophysical survey vessel and activities. Sick or injured individuals will require greater scrutiny.

Northern Elephant Seal (*Mirounga angustirostris*)
Elephant seals are rarely observed in the nearshore waters of Santa Monica Bay, but individual animals might be observed by monitors for the Hyperion 1-Mile Outfall Repair Project. Elephant seals exhibit extreme sexual dimorphism in size; males grow to 14' and 5,000 pounds, while females grow to 11' and 1,400 pounds. Female elephant seals forage in the open ocean, while male elephant seals forage along the continental shelf. Elephant seals spend most of their time at sea, and usually only come to land to give birth, breed, and molt. These activities occur at rookeries on offshore islands and remote mainland beaches, none of which are located in Santa Monica Bay. Elephant seals are skilled swimmers and should be capable of evading any adverse effects from the Hyperion 1-Mile Outfall Repair Project, but sick or injured individuals will require greater observations.

Southern Sea Otter (*Enhydra lutris*): Sea otters are rarely observed in Santa Monica Bay but it is possible that an individual sea otter could enter the Protective Zone around the Hyperion 1-Mile Outfall Repair Project. Sea otters are protected by both the MMPA and the ESA. Sea otters are skilled swimmers and should be capable of evading any adverse effects from the Hyperion 1-Mile Outfall Repair Project, but sick or injured individuals will require greater scrutiny.

Sea Turtles (various species)
Description and Abundance in the Area: Four sea turtle species have been observed in southern California: green sea turtle (*Chelonia mydas*), leatherback sea turtle (*Dermochelys coriacea*), Olive Ridley sea turtle (*Lepidochelys olizacea*) and loggerhead sea turtle (*Caretta caretta*). All are listed as either threatened or endangered under the Federal ESA. The San Gabriel River has been recently identified by the National Marine Fisheries Service (NMFS) as the site of a growing population of green sea turtles. This is in addition to a known population in San Diego Bay. Loggerheads, leatherbacks, and Olive Ridley sea turtles are uncommon in southern California, but they have been observed.
Migration: All sea turtles make extensive spawning migrations. Green sea turtles have been observed in both the summer and winter, with more sporadic observations of the remaining species. The Gulf of California and all along the Baja Peninsula are prominent spawning grounds for most sea turtles, but ongoing research by NMFS and academic researchers suggests some individuals may be residing in southern California.
Behavior: All sea turtles are relatively slow moving and capable of maintaining extended submerged periods. Their typically dark coloration, low profile, and swimming abilities

can make them difficult to observe at a distance. This difficulty in identifying sea turtles provides for greater opportunity for accidental take during a survey. Therefore, care should be taken to monitor for their presence and once sighted, extreme caution should be used to ensure no take occurs. This includes temporarily halting all activities once an animal has been spotted within 600 meters (m) of the side scan survey area, the protection zone listed for side scan sonar in the California State Lands Commission's Data Collection Guidelines for Marine Wildlife Monitors (Appendix 2). Activities may resume if the animal has been observed swimming away from the survey area or no sightings have been made for 60 minutes.

Marine Biological Resources Protection

MBC will provide the following environmental compliance during the side-scan sonar and multibeam sonar surveys:

1. A National Marine Fisheries Service (NMFS) certified marine mammal observer shall be onsite whenever a geophysical survey activity is underway. A single observer aboard each survey vessel is sufficient for the equipment used by MBC as it all operates at ≥ 600 kHz. No protection zone is needed while using the side scan sonar or multibeam sonar because their operational frequency (≥ 200 kHz) is above the known functional hearing range of marine mammals and sea turtles.

2. Survey activities shall be temporarily stopped as soon as can be safely achieved if a sea turtle or non-pinniped marine mammal is sighted on a potentially intersecting course with the survey vessel. Surveys may resume only when the animal has safely transited away from the vessel's course. The vessel's crew will make no effort to divert the animal, but rather wait for the animal to proceed naturally. Pinnipeds are expected to commonly swim around the vessel. Vessel speeds while conducting a side scan survey is 3-4 knots and the multibeam survey is 5-knots, which are presumably slow enough vessel speeds for pinnipeds to easily evade the vessel. No surveying will be conducted near pinniped haul out sites.

Monitoring Plan

Role of Marine Monitors

MBC staff members have been certified as marine mammal monitors by the National Marine Fisheries Service (NMFS). MBC will assign one (1) NMFS-certified marine mammal observer to each survey boat, and marine wildlife monitor will be onsite during all survey activities. Only one (1) marine mammal monitor is required on each survey boat because the surveys will take only about 2-3 hours to complete and the boats are too small to accomodate more than 1 monitor.

The monitor will, to the extent possible, act to prevent collisions with marine wildlife. Monitors will conduct their observations from the passenger seat in the survey boat, next to the boat driver, which offers the best vantage point for observing marine wildlife.

All sightings will be logged on the standard form included in Appendix 2. The form available in Appendix 3, in addtion to the collision reporting items listed below, will be completed, to the extent possible, in the event a sick or injured animal is sighted or if a collision has occurred. After completing the form, marine monitors will report it to the proper agency. The United States Coast Guard (USCG) will be notified if the animal poses a threat to mariners, such as an injured or dead great whale in the work area. Contact information for the California Department of Fish and Wildlife, National Marine Fisheries Service, and USCG are included in Table 2.

TABLE 2. CONTACT LIST FOR MARINE WILDLIFE MONITORING. ALL PROJECT ASSETS IN THE AREA WILL MONITOR VHF CHANNEL 13, 16, OR 67.

Company	Staff/Position Name	Mobile Phone
DFW	Enforcement Dispatch Desk	562-598-1032
NMFS	Stranding Coordinator	562-980-4017
California State Lands Commission	Environmental Planning and Management	916-574-1938
USCG	VHF Marine Radio - Channel 16	

Marine Mammal Observers

MBC will provide NMFS-certified marine mammal observers aboard each of the vessels conducting side-scan sonar and multibeam sonar surveys. The NMFS-certified marine mammal observers shall include:

Jen Rankin: Marine Mammal Observer during multibeam sonar surveys by SV TATI B.

Jenny Smith: Marine Mammal Observer during side-scan surveys by SV SCORPAENA.

An alternate marine mammal observer, Mr. David Schuessler, will replace Ms. Rankin or Ms. Smith, if needed. Resumes for Ms. Rankin, Ms. Smith and Mr. Schuessler are provided in Appendix 1.

Pre-Survey Notifications

A Notice to Mariners will be submitted to the United States Coast Guard prior to the start of each survey. The Notice to Mariners will provide information regarding proposed activities and coordinates of the survey location. In addition, MBC will notify the local harbormasters' office and dive shops prior to the start of survey activities. Copies of the local Notice to Mariners and announcements to local marinas and dive shops are provided in Appendix 5.

The geophysical survey notification list for the Hyperion 1-Mile Outfall sonar surveys include:

- Local Notice to Mariners was sent on February 23, 2017 to the Commander, 11th Coast Guard District, Building 50-2 Coast Guard Island Alameda, CA 94501-5100. E-Mail: d11Inm@uscg.mil

- Notification was sent on February 23, 2017 to Deputy Godfrey (regodfre@lasd.org) of the Marina Del Rey Harbor Patrol. Deputy Godfrey will forward the "Local Notice to Mariners" to the Santa Monica Harbor Patrol and the Santa Monica Lifeguards.

- Notification was sent on February 23, 2017 to Mr. Ricky Rivera (ricky@kingharbor.com) at King Harbor Marina. Mr. Rivera will forward the information to the Harbor Patrol and local lifeguards.

- Notification was sent on February 23, 2017 to Scuba Haus Dive Shop, Santa Monica, CA. E-mail address: (Rocky@scubahaus.com).

- Notification was sent on February 23, 2017 to Ocean Adventures Dive Co., Santa Monica, CA. E-mail address: dive@scubadivela.com

- Notification was sent on February 23, 2017 to Eco Dive Center, Santa Monica, CA. E-mail address: scuba@ecodivecenter.com

Three days prior to the initiation of each survey, MBC marine scientists will contact National Oceanic and Atmospheric Administration (NOAA) Fisheries Long Beach office staff and local private whale-watching operations to acquire information on the recently-observed composition and relative abundance of marine wildlife in the survey area. That information will be conveyed to the vessel crew and survey team prior to departure for the survey area.

Marine Protected Areas and Pinniped Haul Out Sites

No marine protected areas or pinniped haul out sites or rookeries are located in Santa Monica Bay. The closest marine protected areas to the Hyperion 1-Mile Outfall include the Point Vicente State Marine Conservation Area, located 15 miles away, and the Point Dume State Marine Reserve located 23 miles away.

Fishing Gear Clearance

In addition to submitting the required Notice to Mariners that will alert commercial fishers of pending survey activities, the survey vessels will traverse the proposed survey corridor to note and record the presence of deployed fishing gear. If fishing gear is

observed, the location of fishing gear (buoys) and license number indicated on the gear will be noted, and the California Department of Fish and Wildlife (CDFW) Southern District Enforcement Office will be contacted. No survey lines will be completed within 30 m (100 ft) of any observed fishing gear. The survey crew will not remove or relocate any fishing gear; removal or relocation will only be accomplished by the owner or by an authorized CDFW agent.

The following agencies will be contacted if fishing gear is located within the survey area:

- Enforcement Dispatch Desk for the California Department of Fish and Wildlife, Southern District: (562) 598-1032
- California Department of Fish and Wildlife, Marine Division: (831) 649-2870
- Joint Oil Fisheries Liaison Office (JOFLO): (805) 963-8819

Current Biological Information

Recent sightings of marine mammals in Santa Monica Bay during 2016 were compiled from Captain Dave's Dolphin and Whale Watching Safari website at: http://www.dolphinsafari.com/sightingslog.html.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FREQUENTLY SEEN WHALES, DOLPHINS, & WILDLIFE:												
Common Dolphin	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Bottlenose Dolphin	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Pacific White-sided Dolphin	XXX	XXX	XXX	XX	XX	X			X	XXX	XXX	XXX
Risso's Dolphin	XXX	XXX	XXX	X	XX	XX	XXX	XXX	XXX	XXX	XXX	XXX
Gray Whales	XXX	XXX	XXX	XXX	XXX	X	X				X	XXX
Gray Whales & Calves	X	X	XX	XXX	XXX	X						XX
Blue Whales		X	XX	XX	XXX	XXX	XXX	XXX	XXX	XXX	XX	X
Fin Whales	XX	XXX	XXX	XXX	XXX	XX	XXX	XXX	XX	XXX	XX	XX
Minke Whales	XX	X	XX	X	XX	XXX	XX	XX	XX	XX	XX	XX
Humpback Whales	XX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XX
California Sea Lions	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Elephant Seals	X				XX		XX	XXX	XXX	XX		
INFREQUENTLY SEEN WHALES & DOLPHINS:												
Orcas (Killer Whales)	XX	X	X			X					X	XX
False Killer Whales			XX	X	X							
Pilot Whales	X				X	X				XX		
Bryde's Whales						XX	XX	X	X			
Sperm Whales										X		
	X=1 Sighting			X X= 2-6 Sightings				X X X= 7+ Sightings				

Survey Monitoring and Mitigation Measures

During the data collection efforts, the marine mammal observer will use binoculars to observe the water surface in the general survey area while located at a high vantage point onboard the survey vessel. As specified in the CSLC-issued geophysical survey permit, surveys utilizing equipment with an operating frequency greater than 200 kHz will not require a designated safety zone. The marine mammal observer will have the authority to recommend halting data collecting operations if marine wildlife is observed reacting negatively to the survey-related activities.

The marine mammal observer will also have the authority to recommend continuation or cessation of operations during periods of limited visibility based on the observed abundance of marine wildlife. Periodic reevaluation of weather conditions and reassessment of the continuation/cessation recommendation will be completed by the marine mammal observer. With the incorporation of these measures, and additional mitigation measures listed below, the proposed survey activities have a low potential of injury and/or disturbance to marine wildlife. The following operation-related actions will be implemented in accordance with CSLC permit requirements:

1. Survey operator shall use a "soft start" technique at the beginning of survey activities each day (or following a shutdown) to allow any marine mammal that may be in the Project area to leave before the sound sources reach full energy. The survey operator will initiate each piece of equipment at the lowest practical sound level, increasing the output no greater than six decibels (dB) per five-minute period;

2. During operations, if an animal's actions are observed to be "irregular" the marine mammal observer will have the authority to recommend the cessation of data collection until the animal moves out of the survey Area. If the behavior is observed, the equipment will be shut-off and will be restarted and ramped-up to full power or will not be started until the animal(s) is/are outside of the survey area;

3. The marine mammal observer will have the authority to recommend halting data collecting operations if a large concentration of diving birds/sea birds is observed in the immediate vicinity;

4. Unless the safety of the vessel or crew would be in jeopardy, avoidance measures instituted during vessel transit will also be implemented during geophysical data collection; and

5. Survey operator shall follow, to the maximum extent possible, the guidelines of Zykov (2013) as they pertain to the use of side-scan sonar, including:

    a) Using the shortest possible pulse length; and

    b) Lowering the pulse rate (pings per second) as much as feasible.

OBSERVATION RECORDING

The marine mammal observer will record observations on pre-printed forms and will photo-document observations whenever possible. The completed forms will be used as the primary data sources for the post-survey report which will be provided to the CSLC and/or other agencies, if requested.

Collision Response

The Marine Mammal Protection Act (MMPA) requires that collisions with or other survey-related impacts to marine wildlife will be reported promptly to the National Marine Fisheries Service (NMFS) Stranding Coordinator.

If a collision or impacts to marine wildlife occurs, the vessel will stop, if safe to do so. However, the vessel is not obligated to stand by and may proceed after confirming that it will not further damage the animal by doing so. The vessel will then communicate by radio or telephone all details to the MBC's office in Costa Mesa, California. Upon receiving notice of collision, MBC will notify the following Federal and State agencies:

- National Marine Fisheries Service, Long Beach, CA. Attention: Justin Viezbicke Stranding Coordinator. Telephone: (562) 980-3230.
- California Department of Fish and Wildlife Los Alamitos, CA. Attention: Enforcement Dispatch Desk. Telephone: (562) 598-1032.
- California State Lands Commission, Sacramento, CA. Attention: Division of Environmental Planning and Management. Telephone: (916) 574-1938.

The vessel operator, with guidance from the marine mammal observer, must document the conditions under which the accident occurred, including the following:

- Location (latitude and longitude) of the vessel when the collision occurred;
- Date and time of collision;
- Speed and heading of the vessel at the time of collision;
- Observation conditions (e.g., wind speed and direction, swell height, visibility in miles or kilometers, and presence of rain or fog) at the time of collision;
- Species of marine wildlife contacted (if known);
- Whether the marine mammal observer was observing for marine wildlife at the time of collision; and
- Name of vessel, vessel owner/operator (the company), and captain or officer in charge of the vessel at time of collision.

It is unlikely that the vessel will be asked to stand by until NMFS or CDFW personnel arrive; however, this will be determined by the NMFS Stranding Coordinator. According to the MMPA, the vessel operator is not allowed to aid injured marine wildlife or recover the carcass unless requested to do so by the NMFS Stranding Coordinator.

Although NMFS has primary responsibility for marine mammals in both State and Federal waters, the CDFW will also be advised that an incident has occurred in State waters affecting a protected species.

Monitoring Report

A technical report will be prepared documenting the Project activities, a summary of observations and any encounters with marine wildlife, and subsequent avoidance actions taken during the survey. The report will be submitted to the California State Lands Commission within two weeks after completion of each field data collection.

BIBLIOGRAPY

Zykov, M. 2013. Underwater Sound Modeling of Low Energy Geophysical Equipment Operations. JASCO document 00600, Version 2.0. Technical Report by JASCO Applied Sciences for CSA Ocean Sciences Inc.

APPENDIX 1

RESUMES FOR MARINE MAMMAL OBSERVERS ABOARD SURVEY VESSELS.

JENNIFER L. RANKIN **MARINE MAMMAL OBSERVER**

EXPERIENCE SUMMARY

Over ten years of experience in ecological monitoring, both terrestrial and marine. Proficient in data collecting and analysis of nearshore marine surveys, especially GIS-based spatial analysis. Serves as MBC's principle GIS analyst and technician in charge of map preparation and analysis. Received certification as Marine Mammal Observer from National Marine Fisheries Services in 2014.

EDUCATION

B.S., Forestry; minor in Environmental Ethics, Humboldt State University, 2003.
Certificate, GIS, California State University Fullerton Extended Education, 2008.

PROFESSIONAL HISTORY

MBC Applied Environmental Sciences. Technician, 2007 to present; Associate Technician, 2007 to 2007; Assistant Technician, 2006 to 2007.

USDA Forest Service, Pacific Northwest Research Station. Forestry Technician May 2005 to November 2005.

USDA Forest Service, Rocky Mountain Research Station. Forestry Technician, June 2004 to October 2004.

USDA Forest Service, Stanislaus National Forest. Information Receptionist, 2002 to 2003.

PROJECT EXPERIENCE

Marine Mammal Monitoring. National Marine Fisheries Service-certified marine mammal observer monitoring construction projects in the Ports of Los Angeles and Long Beach to ensure no impacts to marine mammals as a result of construction activities and associated sound produced.

Kelp Consortium. Image analyst and GIS technician charged with geoprocessing aerial photographs of coastal California from Santa Barbara to the US-Mexico border. Compiles images of giant kelp beds throughout the area, generates map series, and calculates kelp canopy area by California Department of Fish and Game kelp bed designation using Spatial Analyst in the desktop ArcGIS 10.1platform.

Coastal Generating Station NPDES Monitoring Studies. Technician involved with data collection and report preparation for biannual NPDES water quality monitoring at 11 coastal generating stations from Ventura County to San Diego. Clients included the Los Angeles Department of Water and Power, Southern California Edison Company, AES Corporation, Houston Industries, NRG Energy, Inc., Reliant Energy, and Sempra Energy. Monitoring responsibilities sediment and infauna collection using van Veens, intertidal and subtidal surveys.

JENNIFER N. SMITH **Marine Mammal Observer**

EXPERIENCE SUMMARY

Received certification as Marine Mammal Observer from National Marine Fisheries Services in 2014. Ten years of experience at conducting environmental monitoring in southern California. Efficient in data collecting and analysis of nearshore marine surveys. Experience in benthic infauna collection and laboratory sorting, fish and invertebrate taxonomic identification, otter trawl, and beach seines.

EDUCATION

B.S. Marine Biology: California State University, Long Beach. 2007
Relevant Coursework: Fisheries and Conservation, Marine Mammology.

PROFESSIONAL HISTORY

MBC Applied Environmental Sciences. Associate Technician, 2010-present; Assistant Technician, 2009-2010.

Ecorp Consulting, Inc. Aquatic Intern, 2007.

PROJECT EXPERIENCE

Marine Mammal Monitoring. National Marine Fisheries Service-certified marine mammal observer monitoring construction projects in the Ports of Los Angeles and Long Beach to ensure no impacts to marine mammals as a result of construction activities and associated sound produced.

Marine Mammal Care Center. Participated as an animal care assistant working largely with northern elephant seals, sea lions, and harbor seals documenting and improving their health for future release.

Coastal Generating Station NPDES Monitoring Studies. Staff biologist for quarterly and biannual NPDES monitoring studies at 11 coastal generating stations from Ventura County to San Diego County. Tasks include identification of fish and macroinvertebrate captured in trawls. Conducts observations and identifications of marine birds and mammals during field surveys.

Invasive Species Removal in the Santa Margarita River. Assisted on the identification and collection of invasive species using net and beach seines, electric shock fishing. Monitoring the population of native species found during surveys.

DAVID J. SCHUESSLER, JR. **Marine Mammal Observer**

EXPERIENCE SUMMARY

Received certification as Marine Mammal Observer from National Marine Fisheries Services in 2014. Seven years of experience at conducting environmental monitoring in southern California. Efficient in data collection and analysis of nearshore marine surveys. Experienced in stormwater sampling, benthic infauna collection and laboratory sorting, fish and invertebrate taxonomic identification and collection, eelgrass and *Caulerpa* surveys, otter trawl, and beach seines.

EDUCATION

B.S. Marine Biology: California State University, Long Beach. 2010

USC Wrigley Institute of Environmental Studies, Catalina Island. 2009

Relevant Coursework: Fisheries and Conservation Biology, Ecology of Marine Communities.

PROFESSIONAL HISTORY

MBC Applied Environmental Sciences. AssociateTechnician, 10/2010 - Present.

CSULB - Biological Sciences. Assistant Marine Technician, 1/2008 - 9/2008

PROJECT EXPERIENCE

Marine Mammal Monitoring. National Marine Fisheries Service-certified marine mammal observer monitoring construction projects in the Ports of Los Angeles and Long Beach to ensure no impacts to marine mammals as a result of construction activities and associated sound produced.

Coastal Generating Station NPDES Monitoring Studies. Staff biologist for quarterly and biannual NPDES monitoring studies at 11 coastal generating stations from Ventura County to San Diego County. Tasks include identification of fish and macroinvertebrate captured in trawls. Conducts observations and identifications of marine birds and mammals during field surveys.

Oceanographic and Biological Studies. Conducted field studies for a proposed desalination facility offshore Marine Corps Base Camp Pendleton (Oceanside). Study components included: measurements of temperature by thermistor chain, measurement of currents by acoustic Doppler current profilers (ADCPs), trawls, subtidal reef surveys, sediment grabs, and water quality profiles.

APPENDIX 2

MBC OFFSHORE SPILL RESPONSE PLAN

MBC SPILL RESPONSE PLAN

FOR OFFSHORE OPERATIONS

Introduction: This Spill Response Plan (SRP) is in support of MBC *Applied Environmental Sciences* (MBC) offshore operations. The purpose of this SRP is to present the procedures and protocols that will be utilized in the event of a spill resulting from offshore survey activities.

For purposes of this SRP, a minor oil spill is defined as five barrels or less and a major spill is defined as more than five barrels. MBC vessels occasionally carry formalin, a hazardous material, used to preserve biological samples in the field. For this plan a minor spill is defined as less than 100 ml and a large spill more than 100 ml.

Spill sources of hydrocarbons are limited to leakage or spillage of fuel or lubricants from vessels or marine equipment used during offshore survey operations, with all volumes carried below the threshold for a major spill. The 26' survey vessels SCORPAENA and TATI B will be used to conduct offshore work.

While all vessels are considered potential spill sources, the likelihood of a spill is remote because a spill could only occur if the hull of a vessel is breached in the area of the tanks or if a vessel sinks. The vessels are constructed with multiple watertight compartments to isolate flooding and reduce the risk of sinking should their hulls be punctured.

All vessel and equipment refueling will be conducted using Best Management Practices (BMPs) and will be performed in a manner best suitable to minimize the potential for fuel spillage.

Spill sources of hazardous materials are limited to leakage or spillage from carboys or sample containers or while dosing samples during offshore survey operations. Volumes carried potentially exceed the threshold for a large spill, although MBC vessels carry no more than about 12 liters of undiluted formalin on the vessels at any time. All carboys and squeeze bottles are stored in a secondary, sealed container when not in immediate use. To further prevent spillage, formalin transfers are conducted utilizing minimum-volume, narrow-mouthed squeeze bottles to allow for precise dosing of the sample containers. In addition, all carboys and squeeze bottles are stored in a secondary, sealed contained when not in immediate use. Sample containers are dosed to a level of only 10% formalin. Sample containers are either plastic, shatterproof jars with plastic lid-liners to prevent spills if the jar is knocked over or soft plastic twirl packs which seal tightly with a integrated wire band. After dosing, jars are placed upright in boxes out of the immediate work area to prevent being knocked over. Samples in twirl packs are placed in a covered five-gallon plastic bucket which is sealed for safe storage to prevent spill or leakage. In addition to

these precautions, when formalin is on an MBC vessel, the vessel also carries a supply of Formalex Green ™, a commercially available, California State Certified reagent that neutralizes formalin to form non-hazardous polymeric colloidal solids safe for disposal. MBC vessels carry enough Formalex Green™ to neutralize all formalin on-board at any time, and keep a spray bottle on-hand at all times to neutralize any drips or small spills which might occur during transfers and dosing.

Spill Response Team: MBC's personnel on-site are responsible for reporting, containment, and clean up of any small spills using onsite equipment and procedures. The onsite team will be supervised by the vessel Captain.

Onsite Response Equipment: The onsite spill response team will have access to an appropriate quantity of absorbent pads, which will be maintained onboard. In the event of a spill, the Field Leader will immediately cease project operations in order to apply sorbent pads. If formalin is on the vessel, a sufficient amount of Formalex Green™ to neutralize the formalin will also be carried on the vessel with some available in a spray bottle for immediate use in the event of any drips or small spills which might occur.
Table 1 lists the minimum onsite spill response equipment that will be maintained onsite for emergency response of miscellaneous spills.

Table 1. Onsite Spill Response Equipment Inventory

Quantity	Equipment Type
30	3M Type 156 Sorbent Pads
30	Sealable Plastic Storage Bags
As-needed Volume	Formalex Green™

Notification: An important step in the response procedure is notification to others of an incident. Notification is essential to activate the response organizations, alert company management, obtain assistance and cooperation of agencies, mobilize resources, and comply with local, state, and federal regulations. The order of notification is based on the premise that those parties who can render assistance in controlling or minimizing the impacts of an incident should be notified before those that are remote from the incident. Table 2 presents a matrix for emergency Agency notification. The notification process encompasses the following categories:

- Emergency Agency notification
- Company notification/onsite spill response team activation
- Cleanup contractors (if required)
- Notification of other interested parties
- Periodic progress updates and reports (if necessary)

Table 2. Emergency Agency Notification Matrix

Type of Emergency	Agencies to be Notified	Telephone	Notification Criteria	Notification Time Frame	Information to Report
Spill to Land or Marine Waters	Marina del Rey Harbor Police	(310) 482-6031 VHF Radio 16	All spills to land or water	Immediately	1. Location of release or threatened release 2. Qty released 3. Type of spill 4. Your name & phone number
	USCG-LA/ Long Beach Marine Safety Office	(310) 521-3801 VHF Radio 16			
	California Department of Fish and Game/ OSPR	(888) 334-2258			
	California Office of Emergency Services	(800) 852-7550			
	National Response Center	(800) 424-8802			
	State Lands Commission	(562) 499-6312			
	California Coastal Commission	Ellen Faurot-Daniels, (415) 904-5285 (work) (415) 201-5792 (pager).			
	Oiled Wildlife Care Network	(530) 754-9035			
	Minerals Management Service	(805) 389-7775 or (805) 389-7550	Spill entering federal waters only		
Medical Emergencies	Fire Department/ Ambulance	**911**	Medical assistance and/or transport required	ASAP	1. Type of injury 2. Location 3. Condition 4. Action taken 5. No. of victims
	CalOSHA	(415) 737-2932		As required	

The Lempert-Keene Seastrand Oil Spill Prevention and Response Act (SB 2040) requires notification of the California Office of Emergency Services when oil spills occur or threaten to occur from facilities, vessels, or pipelines into California marine waters. The California Code of Regulations implementing SB 2040 requires that the specific information shown in Table 3 be given to the agencies when making notifications.

Table 3. Information Checklist

Name of reporter. Facility name and location Date and time of the spill
Cause (if known -- don't speculate) and location of the spill Estimate of the volume of oil spilled and the volume at immediate risk of spillage Material spilled (e.g., crude oil), and any inhalation hazards or explosive vapor hazards, if known Prevailing sea conditions: • Wave height • Size and appearance of slick • Direction of slick movement • Speed of movement, if known Prevailing weather conditions: • Wind speed • Wind direction • Air temperature Measures taken or planned by personnel on scene • For containment • For cleanup Current condition of the facility Any casualties? ***NOTE: When making reports, record the agency, name of person contacted, and the date and time of notification. Reporting of a spill shall not be delayed solely to gather all the information noted above.***

All actions, including agency notification, should be recorded on the vessel's log book. A regulatory agency address directory is provided in Table 4. Essential agency notifications are further assured by the California Office of Emergency Services and the National Response Center, since they will notify related state and federal agencies. If a spill impacts navigable waters, notification of the National Response Center is mandatory and normally results in simultaneous notification of the U.S. Coast Guard. However, it is recommended that a call be made to the local U.S. Coast Guard office in San Diego at (619) 278-7670. Based on the spill trajectory analysis, if the spill is a threat to the shoreline, the appropriate fire department should also be contacted.

Table 4. Addresses of Regulatory Agencies

NATIONAL RESPONSE CENTER U.S. Coast Guard Headquarters 2100 Second Street SW Washington, D.C. 20593 **MINERALS MANAGEMENT SERVICE** Pacific OCS Regional Office & Camarillo District Office 770 Paseo Camarillo Camarillo, CA 93010 **U.S. COAST GUARD – LA/LONG BEACH MARINE SAFETY OFFICE** 1001 S. Seasjde Ave., BLDG 20 San Pedro, CA 90731 **U.S. DEPARTMENT OF TRANSPORTATION** 111 Grand Avenue, P.O. Box 23660 Oakland, CA 94623 **NATIONAL MARINE FISHERIES SERVICE** 650 Capital Mall Sacramento, CA 95814	**CALIFORNIA DEPARTMENT OF FISH AND GAME** **Office of Spill Prevention and Response (OSPR)** 1730 I Street PO Box 944209 Sacramento, CA 94244 **CALIFORNIA OFFICE OF EMERGENCY SERVICES** 2800 Meadowview Road Sacramento, CA 95832 **CALIFORNIA DIVISION OF SAFETY AND HEALTH** 1655 Mesa Verde Avenue, Room 150 Ventura, CA 93003 **CALIFORNIA STATE LANDS COMMISSION** 330 Golden Shore, Suite 210 Long Beach, CA 90802 **CALIFORNIA COASTAL COMMISSION** 45 Fremont, Suite 2000 San Francisco, CA 94105-2219

Company Notification: MBC requires that all emergencies be brought to the attention of corporate management and client. The vessel Captain or Field Leader will notify by radio or telephone appropriate corporate managers with an initial assessment of the extent and nature of the spill, and will activate additional company resources if necessary. The contact information for MBC is provided below:

D. Shane Beck, President	
Work:	714-850-4830
Cellular:	949-466-5029
E-Mail:	sbeck@mbcnet.net

Marine Spill Scenarios and Response Procedures for Minor Marine Spills: This scenario consists of minor spillage of oil or oily water (less than 5 barrels) from a vessel or deck equipment. Response will consist of deployment of sorbent pads that are stored on the vessels. Table 5 lists the response procedures for a minor marine spill.

Table 5. Minor Marine Oil Spill Response Procedures

Responsible Person	Action
Captain - Contractor	• Assess the spill size and type of material spilled. • Take action to contain the spill and prevent further spillage. • Inform the Project Superintendent as soon as possible as to the source of the spill, type of material spilled and status of control operations. • Maintain surveillance of source and oil slick. • Assist the onsite response team in implementing clean up procedures including deployment of sorbent pads and proper storage and disposal of oily debris and sorbent pads.
Field Leader - Contractor	• Account for all personnel and ensure their safety. • Determine if there is a threat of fire or explosion. • If a threat of fire or explosion exists, suspend all control and/or response operations until the threat is eliminated. • Assess the spill situation to determine the status of response operations, estimate spill volume, estimate speed and direction of oil slick movement and determine resource needs. • Notify the Project Manager.
Field Leader – Contractor	• Mobilize the onsite spill response team. • Notify appropriate agencies including: – Oceanside Harbor Police VHF 16, (76) 435-4000 – U.S. Coast Guard Marine Safety Office (510) 437-2943 – California Department of Fish and Game/OSPR (916) 445-0045) – National Response Center (800) 424-8802) – California Office of Emergency Services (800) 852-7550) – State Lands Commission (562) 499-6312) – Oil Wildlife Care Network (530) 754-9035 • Supervise response and clean up operations. • File written reports to appropriate agencies.

APPENDIX 3

DATA COLLECTION FORMS FOR

MARINE MAMMAL OBSERVERS

Marine Wildlife Observations Form

Date: _____ Monitor: _____

Time:	Latitude:	Longitude:
Weather:	Cloud Cover:	Glare:
Visibility:	Wind Speed:	Sea State:
Swell Height:	Survey Vessel Activity:	
Marine Wildlife Observations and Interactions:		

Time:	Latitude:	Longitude:
Weather:	Cloud Cover:	Glare:
Visibility:	Wind Speed:	Sea State:
Swell Height:	Survey Vessel Activity:	
Marine Wildlife Observations and Interactions:		

Page ___ of ___

Marine Environmental Variables Form

Date: _____ Monitor: _____

Time	Latitude	Longitude	Vessel Activity	Weather	Cloud Cover	Glare	Visibility	Wind Speed	Sea State	Swell Height	Comments

Page ___ of ___

APPENDIX 4

MARINE MAMMAL & REPTILE COLLISION REPORTING INSTRUCTIONS FORM

MARINE MAMMAL AND REPTILE COLLISION REPORTING

If a collision with a marine mammal or reptile occurs, the Permittee shall document the conditions under which the accident occurred, including the following:

1. Vessel location (latitude, longitude) when the collision occurred;
2. Date and time of collision;
3. Speed and heading of the vessel at the time of collision;
4. Observation conditions (e.g., wind speed and direction, swell height, visibility in miles or kilometers, and presence of rain or fog) at the time of collision;
5. Species of marine wildlife contacted (if known);
6. Whether an observer was monitoring marine wildlife at the time of collision; and
7. Name of vessel, vessel owner/operator, and captain officer in charge of the vessel at time of collision.

After a collision, the vessel shall stop, if safe to do so; however, the vessel is not obligated to stand by and may proceed after confirming that it will not further damage the animal by doing so. The vessel will then immediately communicate by radio or telephone all details to the vessel's base of operations, and shall immediately report the incident. Consistent with Marine Mammal Protection Act requirements, the vessel's base of operations or, if an onboard telephone is available, the vessel captain him/herself, will then immediately call the National Oceanic and Atmospheric Administration (NOAA) Stranding Coordinator to report the collision and follow any subsequent instructions. From the report, the Stranding Coordinator will coordinate subsequent action, including enlisting the aid of marine mammal rescue organizations, if appropriate. From the vessel's base of operations, a telephone call will be placed to the Stranding Coordinator, NOAA National Marine Fisheries Service, Southwest Region, Long Beach, to obtain instructions. Although NOAA has primary responsibility for marine mammals in both State and Federal waters, the California Department of Fish and Wildlife will also be advised that an incident has occurred in State waters affecting a protected species.

APPENDIX 5

NOTICE TO MARINERS AND NOTIFICATIONS

23 February 2017

Commander
U.S. Coast Guard, Eleventh District
Bldg. 50-2, CG Island
Alameda, CA 94501-5100

E-Mail: D11LNM@uscg.mil

SUBJECT: Local Notice to Mariners Announcement for Marine Geophysical Surveys at Hyperion 1-Mile Outfall in Santa Monica Bay, California.

Gentlemen:

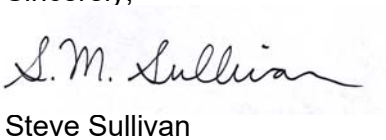
Please post the following announcement in the Local Notice to Mariners:

SOUTHERN CALIFORNIA – SANTA MONICA BAY – SURVEY OPERATIONS: MBC Applied Environmental Sciences will conduct marine geophysical surveys in a 1,000' x 4,200' area over the Hyperion 1-Mile Outfall in Santa Monica Bay, California beginning on 18 March 2017 and ending on 26 March 2017. Two 26' survey vessels will be on scene mapping the seafloor, one vessel using a hull-mounted multibeam sonar and the second vessel towing a submerged side-scan sonar towfish located 100m astern. The 26' multibeam sonar vessel TATI B and the 26' side-scan sonar vessel SCORPAENA will conduct surveys only during daylight hours (7:00am to 6:00pm). The survey vessels will monitor VHF Channels 13 and 16. Mariners are advised to use caution when transiting the survey area, bounded by the following coordinates:

N33º 55' 07.7707" W118º 26' 58.7217"
N33º 54' 58.6874" W118º 26' 53.9861"
N33º 55' 16.4652" W118º 26' 05.0028"
N33º 55' 25.5391" W118º 26' 09.7371"

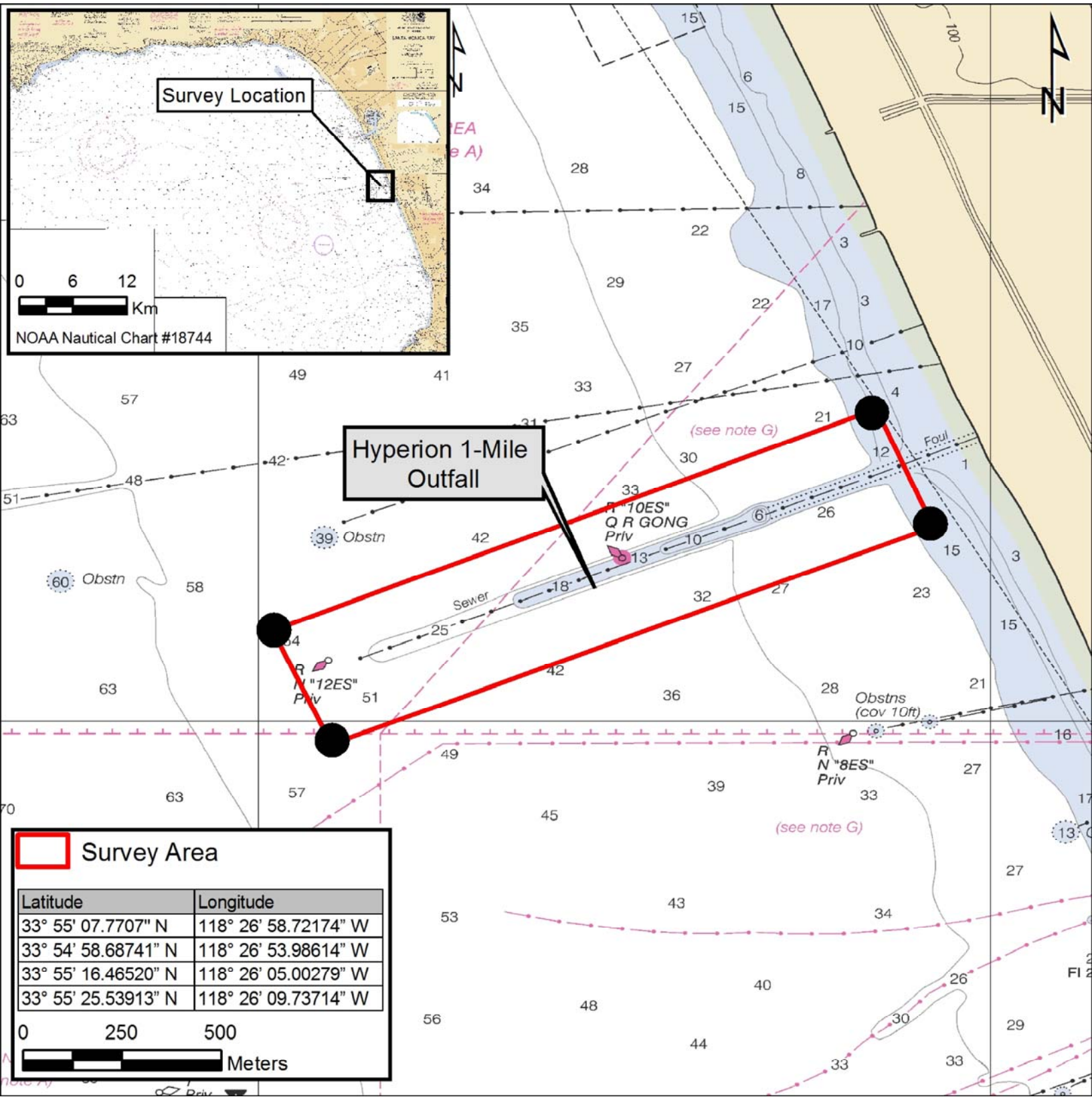
See attached map for location of the survey area. For comments or further details contact Steve Sullivan at 707-246-3696 or ssullivan@mbcnet.net. Chart 18744.

Sincerely,



Steve Sullivan
Cell: (707) 246-3696
ssullivan@mbcnet.net

MBC *Applied Environmental Sciences*
3000 Red Hill Avenue
Costa Mesa, CA 92626
Tel: (714) 850-4830
Fax: (714) 850-4840
Website: **mbcnet.net**


Survey Location
0 6 12
Km
NOAA Nautical Chart #18744
Hyperion 1-Mile Outfall
(see note G)
Foul
Sewer
Obstn
Obstns (cov 10ft)
R "10ES" Q R GONG Priv
R "12ES" Priv
R "8ES" Priv
Survey Area
Latitude
Longitude
33° 55' 07.7707" N
118° 26' 58.72174" W
33° 54' 58.68741" N
118° 26' 53.98614" W
33° 55' 16.46520" N
118° 26' 05.00279" W
33° 55' 25.53913" N
118° 26' 09.73714" W
0 250 500
Meters

Steve Sullivan

From: Steve Sullivan <ssullivan@mbcnet.net>
Sent: Thursday, February 23, 2017 10:15 AM
To: 'D11LNM@USCG.MIL'
Cc: Cameron Katebian (cameron@tci-corp.com); 'Bob Katebian'; Shane Beck (sbeck@mbcnet.net); 'Robert Moore'
Subject: Announcement for Local Notice to Mariners
Attachments: Notice to Mariners for Surveys at Hyperion 1-Mile Outfall in Santa Monica Bay.pdf; hyperion survey.jpg

Gentlemen:

Please publish the attached announcement for a marine survey in the Local Notice to Mariners. The survey area is depicted on the attached nautical chart #18744.

Please contact me with questions or comments.

Thank you.

Sincerely,

Steve Sullivan
Cell: (707) 246-3696
ssullivan@mbcnet.net

MBC *Applied Environmental Sciences*
3000 Red Hill Avenue
Costa Mesa, CA 92626
Tel: (714) 850-4830

Steve Sullivan

From: Steve Sullivan <ssullivan@mbcnet.net>
Sent: Thursday, February 23, 2017 11:14 AM
To: 'regodfre@lasd.org'
Subject: Announcement for Offshore Marine Survey in Santa Monica Bay
Attachments: Notice to Marina del Rey Harbor for Marine Surveys at Hyperion Outfall.pdf

Gentlemen:

Please post the attached announcement for an offshore marine survey in Santa Monica Bay.

Thank you!

Sincerely,

Steve Sullivan
MBC Applied Environmental Sciences
Cell: 707-246-3696
E-mail: ssullivan@mbcnet.net

Steve Sullivan

From: Steve Sullivan <ssullivan@mbcnet.net>
Sent: Thursday, February 23, 2017 11:03 AM
To: 'ricky@kingharbor.com'
Subject: Announcement for Offshore Marine Survey in Santa Monica Bay
Attachments: Notice to King Harbor for Marine Surveys at Hyperion Outfall.pdf

Gentlemen:

Please post the attached announcement for an offshore marine survey in Santa Monica Bay.

Thank you!

Sincerely,

Steve Sullivan
MBC Applied Environmental Sciences
Cell: 707-246-3696
E-mail: ssullivan@mbcnet.net

Steve Sullivan

From: Steve Sullivan <ssullivan@mbcnet.net>
Sent: Thursday, February 23, 2017 11:19 AM
To: 'rocky@scubahaus.com'
Subject: Announcement for Offshore Marine Survey in Santa Monica Bay
Attachments: Notice to Scuba Haus Dive Shop for Marine Surveys at Hyperion Outfall.pdf

Gentlemen:

Please post the attached announcement for an offshore marine survey in Santa Monica Bay.

Thank you!

Sincerely,

Steve Sullivan
MBC Applied Environmental Sciences
Cell: 707-246-3696
E-mail: ssullivan@mbcnet.net

Steve Sullivan

From: Steve Sullivan <ssullivan@mbcnet.net>
Sent: Thursday, February 23, 2017 11:01 AM
To: 'scuba@ecodivecenter.com'
Subject: Notification of Offshore Survey in Santa Monica Bay
Attachments: Notice to Eco Dive Center for Marine Surveys at Hyperion Outfall.pdf

Gentlemen:

Please post the following announcement for an offshore marine survey in Santa Monica Bay.

Thank you!

Sincerely,

Steve Sullivan
MBC Applied Environmental Sciences
Cell: 707-246-3696
E-mail: ssullivan@mbcnet.net

Steve Sullivan

From: Steve Sullivan <ssullivan@mbcnet.net>
Sent: Thursday, February 23, 2017 11:18 AM
To: 'dive@scubadivela.com'
Subject: Announcement of Offshore Marine Survey in Santa Monica Bay
Attachments: Notice to Ocean Adventures Dive Shop for Marine Surveys at Hyperion Outfall.pdf

Gentlemen:

Please post the attached announcement for an offshore marine survey in Santa Monica Bay.

Thank you!

Sincerely,

Steve Sullivan
MBC Applied Environmental Sciences
Cell: 707-246-3696
E-mail: ssullivan@mbcnet.net